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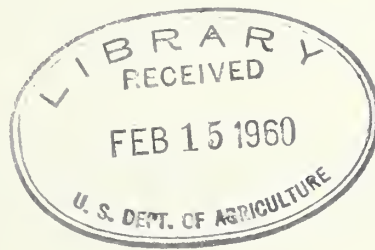


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TALKS ON

RURAL ZONING



Agricultural Research Service

Farm Economics Research Division

UNITED STATES DEPARTMENT OF AGRICULTURE

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EXPLANATION

This is a series of talks on rural zoning made by Erling D. Solberg, Farm Economics Research Division, Agricultural Research Service, between 1951 and 1959. It is reproduced here to fill continuing requests for copies. Most of the talks have been quoted from or cited in zoning, planning, and economic literature.

The talks were made before a variety of audiences, usually at annual meetings of professional organizations - assemblies of agricultural economists, resource specialists, farm leaders, planning and zoning officials, highway engineers and administrators, and residential appraisers. The meetings were held in several States, including California, Tennessee, Michigan, New Jersey, and Virginia, and in Washington, D. C., and Ontario, Canada.

Although each talk deals with rural zoning, the contents of the talks differ. Each speech was a vehicle for developing a different aspect of zoning. For example, in the first, Rural Zoning, Present and Future (page 3), the functional and geographic scope of zoning authority and of zoning regulations in unincorporated areas were discussed, and some emerging land use problems were examined.

Then came such talks as Roadside Zoning (page 14), to assure safer and more efficient highways; Rural Zoning Tools and Objectives (page 26), in which was discussed pioneer zoning in the cutover counties of Wisconsin, and later zoning to protect farming areas; Shall Our Better Soils Grow Crops or Houses (page 39), which depicted the loss to agriculture of the more fertile lands on an expanding urban fringe; Some Limitations and Possibilities of Rural Zoning (page 42), Some Agricultural Zoning Problems (page 47), in which were discussed the obstacles that prevent a wider and more effective use of zoning tools for the protection of agriculture; and Cities and Farms, Side by Side (page 52), which debated the advisability of reserving our more productive soils to meet probable future food and fiber needs, described the incidence of benefits from such reservation, and suggested several protective measures.

The more recent talks were concerned with Reshaping Zoning Tools to Serve Agriculture, (page 65), with the idea of making them more effective for agriculture, including avoidance of urban-agricultural land use conflicts; Zoning of Prospective Land Use Areas (page 72), which discussed urban-agricultural conflicts and remedial zoning measures from the viewpoint of the suburbanite; and Farmers Too Can Benefit From Zoning (page 84), in which the use of old and new zoning tools for the protection of agriculture, with special reference to the exploding urban fringe, was outlined.

Except for the correction of typographic errors, the original wording of each talk is retained in this compilation.

RURAL ZONING, PRESENT AND FUTURE*

New Rural Zoning Problems

Today, new forces are affecting the farming community on the urban fringe. Cities are bursting at their seams. Good roads and automobiles permit spreading the urban populace over the countryside. Commuter zones today embrace expanded areas of rural land. New areas of land-use maladjustments are appearing. Such areas of instability sometimes extend 30 to 50 miles beyond city limits and often overlap fringe areas of neighboring cities. Suburbanization is reaching out, bringing into the rural community scattered residential subdivisions and homes, business centers and ribbon commercial areas, industries, and part-time farms. A condition of haphazard growth and idle land too often prevails; planned development seems to be the exception. Added pressures that cause change on the urban fringe stem from the purchase by city dwellers of farm properties as an investment, or as a form of security and safety, or for other reasons.

The impact of these multiple pressures on the urban fringe agricultural community is often devastating. Land prices rise beyond the reach of operating farmers; taxes reflect speculative land values that may never be realized; special assessments for schools, water supply, sewers, or other improvements are voted by the nonfarm landowners, and development costs are thereby shifted to farm lands that may not be "ripe" for suburbanization for decades. Tax pressures, consequently, may force premature subdivision of good farms or end in tax foreclosure. A rural community's capacity to produce food may be as effectively destroyed by the erosion of premature suburbanization as by the erosion of its soils.

Today's new problems, particularly on the urban fringe, call for the extension of conventional types of zoning regulations, and for the exercise of other zoning powers, sometimes in new and unconventional ways. Of course, zoning alone may not be enough. Other regulatory and remedial measures also may need to be taken. In order to understand how rural zoning may be used to meet these new problems--how zoning regulations and techniques may be adapted to attain new goals--it will be necessary to take a look at zoning in the past and to define a few terms.

Development of Zoning

The earliest zoning in the United States consisted of regulations banning powder mills from all but the outskirts of our colonial settlements.

*Presented at meeting of the American Farm Economics Association and The Canadian Agricultural Economics Society, Guelph, Ontario, Canada, July 25, 1951. Published in "Journal of Farm Economics," Proceedings Number 33(4): pp. 756-767, November 1951.

In 1692, Massachusetts authorized certain towns to assign areas where least offensive for the location of slaughterhouses, stillhouses, and houses for trying tallow and currying leather. Much later, in 1916, the first comprehensive zoning ordinance was enacted in New York City. In 1923, Wisconsin extended zoning to suburban areas, and, in 1929, authorized zoning in the open country. Today, 38 States authorize zoning of a part of or of all unincorporated portions of such states.

But what is meant by the term "zoning"? What is the character of the various types of regulatory powers that are embraced by that concept? Zoning has been defined as the regulation by districts under police power of the height, bulk, and use of buildings, the use of land, and the density of population. This definition will become clearer after an examination of each stick of the bundle of differing but related types of controls that constitute the whole. Zoning involves four major kinds of directives, namely: use, site-area, building dimensions, and density of population. Each of the four, in turn, is composed of several separable parts. For example, the use controls imposed may pertain to buildings only, to land only, or, as is usually the case, to both. A zoning ordinance may create only suburban type zoning districts--residential, commercial, and industrial--or it may establish only open country zones--agricultural, forestry, recreational, and grazing--or districts of both types may be formed. Within such districts multiple variations of permitted or prohibited uses may exist.

Similarly, site-area regulations adopted may control minimum size of lots or tracts, the percentage of the tract that may be occupied by buildings, the size of side or rear yards, courts, or other open spaces, and the set-back of buildings from roads. Building dimension restrictions, moreover, may pertain only to the height of buildings, as is frequently the case, or the regulations may also control the number of stories, size, bulk, kind, and design of buildings. Density of population may be controlled by limiting the number of families permitted per lot or tract, or by prescribing in square feet the minimum areas of ground or floor space required per family.

Zoning developed in crowded cities. Its basic regulations were shaped for urban ends. Later, building on this urban created base, zoning regulations and techniques were developed for intensive land-use areas on the urban fringe and then for open country areas. The future, as we shall see later, promises further adaptation of zoning to serve rural communities.

At this point, a word needs to be said about the functions and character of zoning enabling laws.

Rural Zoning Enabling Laws

Rural units of government must obtain their power to zone from the State. Usually this power is conferred by zoning enabling laws enacted by the various State legislatures. Thirty-eight States have passed such laws empowering any or designated classes of counties, towns or townships, or

other local units of government, to adopt rural zoning ordinances. In total, 175 different enabling laws are in force in the 38 states that authorize zoning in unincorporated areas. Over 100 of these acts apply to counties, 50 apply to towns or townships, and 23 apply to miscellaneous governmental units.

The field of regulatory power that may be exercised by a local government, both as to areas that may be zoned and as to types of regulations that may be imposed, depends upon the particular law conferring such zoning authority. In this respect, the enabling statutes vary materially. The great majority of counties, towns, or townships empowered to adopt ordinances may zone the unincorporated portion of the territory within their respective boundaries. A few county zoning enabling laws limit such territories to areas adjacent to incorporated municipalities, to strips along certain highways, to areas near military reservations, or to densely populated rural areas of limited size.

Most zoning enabling statutes authorize the rural units of government empowered to zone to exercise all of the four main classes of powers mentioned earlier, namely, dimension, site-area, density, and use zoning powers. However, use regulatory powers, under one or more enabling laws in 28 States, presumably may be exercised only in suburban or intensive land-use areas. Besides, 30 zoning enabling statutes in 17 States exempt agricultural activities from zoning regulations. Most of these laws prohibit any regulation or restriction of the use of land, and the use, repair, alteration, or construction of buildings or structures for agricultural purposes. These limitations, however, do not mean that there can be no zoning regulations imposed in agricultural-type districts in such States. Nonagricultural activities are frequently regulated in such districts for the benefit and protection of the rural community.

County Rural Zoning Ordinances

State zoning enabling laws merely empower the various counties, towns, or townships to enact zoning ordinances. These local units of government, at their discretion, may exercise the authority conferred or they may decline to act. However, if they decide to enact zoning ordinances, they must formulate them within the framework of the enabling laws which govern the types of regulations that may be imposed.

By 1949, rural zoning ordinances had been adopted by 173 counties in 23 States. Wisconsin leads the Nation in number of counties having rural zoning ordinances, with over one-half of its counties zoned. In California, 26 of the 58 counties have adopted zoning ordinances. Illinois, Indiana, Nebraska, and Virginia each have ordinances in effect in 10 or more counties, and in seven other States rural zoning ordinances have been enacted by 5 or more counties.

Because a county has enacted a zoning ordinance, it does not necessarily follow that the entire county has been zoned. Generally, only

populous areas are affected by suburban type ordinances, and, frequently, only forested areas are zoned by the open country type. Ordinances combining elements from both types often provide for residual districts that are subject only to minor restrictions or to none at all.

Thirty-five of the 74 county ordinances examined were of the rural comprehensive type. This class of ordinance imposes dimension, site-area, and density of population regulations and, in addition, regulations pertaining to the use of buildings, structures, and land in both suburban and open country areas. The next largest class consists of open-country use ordinances, such as are found in northern Michigan, Minnesota, and Wisconsin. Under this type, only use regulations are imposed.

Zoning districts established by the county ordinances examined are of six main types or classes, namely: residential, agricultural, forestry and recreational, commercial, industrial, and residual. Each main class contains several subclasses, the agricultural class consisting of general agricultural, residential-agricultural, and country home districts. General agricultural districts are provided for in 50 percent of the ordinances examined.

Uses regulated in the three agricultural type districts are of nine main classes, namely: residence, agricultural industries, recreation, commerce, public and semipublic, public utility, mining and related activities, and general industrial uses. Zoning restrictions on agricultural activities in general agricultural districts are infrequent, except for regulations pertaining to farms for the disposal of garbage or offal, hog ranches, and livestock feeding and sales yards. A number of States, as has already been mentioned, exempt agricultural activities from zoning regulations. Such exemptions, as interpreted in a few States, do not apply to tracts containing 5 to 10 acres or less.

Minimum tracts required in country home districts range from 10,000 square feet to 5 acres. Minimums in residential-agricultural zones range from one-half acre to 20 acres. Under provisions of a few county ordinances, minimum tracts required for each dwelling unit vary, depending upon whether there is a private well or a public water supply, whether a septic tank or a public sewer is used, and also depending upon soil conditions. Single-family residences are permitted in all agricultural-type districts, and two-family dwellings are permitted in the greater proportion, but multiple-family units are frequently barred. One ordinance prohibits more than eight families from permanently residing on any one farm, irrespective of size of dwelling units.

Various classes of forestry and/or recreational districts have been established in three Lake States, namely, Michigan, Minnesota, and Wisconsin, and in the States of California, Colorado, Utah, and Washington. In Michigan, emphasis has been on recreational districts, and several classes of zones have been developed. Zoning emphasis in some is directed toward retaining to the maximum the natural environmental conditions and, in

others, toward guiding the development of commercial "resort" zones.

Principles of Zoning

So much for the past. Admittedly these remarks provide a very sketchy outline of the present status of rural zoning in the United States. Enough has been said, however, to show how urban-created legal raw materials—the basic types of zoning regulations and techniques—have been modified and adapted to serve the rural community. What does the future hold for rural zoning? Experience provides guidelines for the future. The very diversity of experimentation in the State zoning laboratories—the legislatures and local zoning agencies—offers many leads. Our problem is largely one of adapting what we have been doing in the past to future objectives. The task of devising new zoning directives and methods to attain new goals becomes easier if we keep in mind the basic types of regulations previously discussed, and are cognizant of some limitations of local zoning stemming from the incidence of zoning benefits and from certain local political aspects of zoning; and also if we are advised of various means used by the State to influence the character of local zoning regulations. With that information as a background, we can more readily appreciate the opportunities for adapting existing zoning devices for the solution of new community problems.

Incidence of Zoning Benefits

Benefits from some types of zoning regulations are local, direct, and personal; from others the advantages are indirect, even intangible, and accrue to the locality as a whole or to society generally. For example, zoning regulations intended to create and maintain healthy, convenient, attractive, and efficient neighborhoods may depend primarily on local initiative and action. Here, the character of the regulations imposed and violations of them have a direct impact on the amenities of the neighborhood properties.

Benefits from other kinds of zoning regulations accrue primarily to the community at large, with lesser or even no advantage resulting to the local neighborhood or its landowners and occupants. Included in this category may be certain types of roadside, watershed, forestry, and recreation district regulations. Roadside zoning regulations may include restrictions or prohibitions on commercial uses and outdoor advertising, and impose off-street parking, set-back, and access controls. Roadside zoning preserves the safety and traffic carrying capacity of the highways. Its benefits accrue primarily to the general public. In fact, the interest of an owner of land adjoining the road often conflicts with the interest of the traveling public.

Benefits resulting from the creation of forestry and/or recreation zoning districts are both local and regional, direct and indirect. Those accruing to forest landowners are ascribed primarily to lessened fire and

trespass hazards, and to lower taxes resulting from the need for fewer public services. Owners of recreational lands and the general public both benefit to the extent that zoning helps to maintain or to improve the recreational character of the districts. Other benefits attributed to zoning of watersheds to forest-recreational uses are the stabilization of stream flows and water supply, and the reduction of flood crests and silt flows. These benefits may accrue primarily to downstream water users and to occupants of the flood plain, that is, to people living outside the forest zone.

Ordinances Usually a Local Product

Although the incidence of the benefits from rural zoning may be local, regional, statewide, or greater, depending upon the character of the regulations adopted, zoning authority customarily is vested by the State in local governments, such as counties, towns, or townships, and other miscellaneous units. Perhaps the public interest would be served if some zoning powers were also exercised at other levels of government. The appropriate level or combination of levels to impose zoning sanctions would seem to depend upon the nature of the problem. The criterion is whichever level can do the best job.

The typical rural-zoning ordinance is a local law adopted by the community for dealing with certain types of existing and prospective land-use and related problems. The ordinance prescribes rules of conduct within the field embraced by its regulations. The field of permissible zoning regulations, however, is limited functionally by the bounds of the authority granted in the enabling law, and it is limited geographically by the boundaries of the local government empowered to zone. Moreover, the scope of regulations actually adopted often is limited in response to individual and group pressures stemming from a divergence of interest between landowners. It is reasonable to expect that types of directives sometimes slighted are those primarily in the general public interest, as distinguished from those conferring specific individual and local benefits. Another factor adversely affecting zoning in many rural communities is the meager budget allowed zoning agencies.

Gradations in State Control of Regulations

Let us turn now to the various means used by the States for influencing the character of local zoning regulations. Six gradations were observed in existing State zoning laws. These gradations suggest various ways available to the States for effecting desirable zoning ends.

The first and the usual means employed is the permissive enabling law. Under this law the State grants zoning powers to some classes of its rural governments and withholds them from others. Moreover, such enabling laws authorize the community to adopt certain types of zoning regulations and impliedly or expressly prohibit others. The local community may exercise some or all of the powers granted, or it may decline to zone.

An added measure of State control over the character of rural-zoning regulations is, no doubt, effected in States that have adopted the second approach and assist local governments with their planning and zoning problems by providing technical guidance. This group of enabling laws designate a State or a regional agency to advise or to participate in the preparation of the original zoning plan.

A third technique is used in a few States. This affirmatively limits the field of choice of zoning regulations by requiring that the community, if it zones, impose regulations of a designated character. Examples of such enabling statutes are an Oklahoma act which lists the characteristics and types of zoning districts that must be created if an ordinance is adopted, a Tennessee statute which excludes from residential districts all nonresidential uses except those enumerated, and a Florida law which designates a 30-foot setback along named roads.

A fourth and more direct approach is employed in two States that reserve the right to review and veto. In Michigan, county zoning ordinances must be approved by the Department of Economic Development before becoming effective. A Missouri law requires prior approval of proposed county zoning regulations from the State Planning Board, the Commissioner of Health, and the chief engineer of the State Highway Commission. The power of veto, although negative, may be used affirmatively to achieve desirable zoning regulations if the community is strongly inclined to zone.

A Florida roadside zoning law illustrates a fifth, more far-reaching approach. By this statute the Duval County Planning Council is "directed, authorized and empowered" to divide highway protective areas into five classes of districts, namely: commercial, industrial, residential, recreational, and agricultural. This law is not permissive but mandatory. The community is ordered to zone.

The sixth and final gradation is exemplified by another Florida law. Under this law, local zoning regulations are directly imposed by the State. The ordinance, adopted by the Florida Legislature, provides detailed zoning regulations for Virginia Park Subdivision, near Tampa.

Possibilities and Prospects

What is the outlook for rural zoning? Certainly we may expect its extension into new areas. The 10 States that remain without enabling legislation may be expected to confer zoning powers on their local governments. Also, we may expect an enlargement of zoning powers conferred under present enabling statutes, both functionally, by the granting of broader zoning authority, and geographically, by the empowering of other local units of government to zone. Perhaps we will see better regional and community planning and a greater integration in the use of the zoning tool with other land-use regulatory tools. The future may also see the State playing a more direct role in zoning. We may see zoning at the regional or multiple-county level,

at a combination of levels, or at the State level. Moreover, the future may bring adaptations in the use of conventional types of zoning regulations and, perhaps, new kinds of regulations. New rural problems and goals call for new zoning techniques. Faint outlines of coming changes, sometimes perhaps experimental, were observed in the zoning enabling laws and ordinances examined. These faint outlines suggest avenues of adaptation of the zoning technique that will be explored in the remaining minutes. Other possibilities may occur to the reader.

Roadside Zoning

Problems stemming from inadequate roadside zoning or from its absence are evident in many rural communities. Merely empowering counties or towns to pass roadside zoning regulations does not assure the adoption of adequate controls. The community, or its neighbor, may decline to zone, or may adopt inadequate regulations. Good roadside zoning too often stops at a political boundary, but the road goes through.

Examples have been cited of some legislative experimentation with roadside zoning, including laws requiring minimum set-back lines, if the community zones; laws directing local governments to adopt regulations; and laws authorizing State agencies to veto roadside ordinances. In 1949, the legislature of another State seriously considered conferring on its State Highway Department authority to zone areas along certain roads.

Perhaps the State is the appropriate level for imposing roadside zoning, at least on primary highways. Greater uniformity in roadside regulation, both geographically and chronologically, is needed to maintain the traffic-carrying capacity of highways, to increase or preserve their safety for travel, and to protect the scenic attractiveness of the landscape. There are numerous examples of new arterials which, after only a few years, become cluttered with ribbon business districts, with a resulting reduction in rate of traffic flow and an increase in traffic hazards. Examples are also common of attrition by local interest causing a gradual breakdown of locally imposed zoning regulations. The larger public interest suffers. A realistic approach calls for administration of roadside zoning at a level better able to resist harmful local pressures.

In 1947, Michigan authorized its cities to eliminate nonconforming uses in residential districts by purchase or condemnation. Similar authority to condemn dangerous nonconforming structures in glide areas is usually conferred by airport zoning enabling laws. An analogous public purpose would be served by the exercise of the power of eminent domain for suppressing dangerous nonconforming uses in roadside zoning districts. Moreover, grants and aids for highway purposes might be predicated on the existence of adequate roadside zoning.

River Basin Developments

Rural zoning is a useful regulatory tool that should not be overlooked when planning river basin developments. No doubt, farm communities in river basins will make increasing use of conventional zoning regulations for guiding their expanding economies. New types of regulations, adaptation of old types to attain new ends, and rural zoning by other levels of government offer possibilities.

Rivers are indifferent to political boundaries and flow unconcernedly toward the sea. On their way, they may confer multiple benefits or wreak major havoc. Unwise land use on the watershed often accentuates problems in the valleys below. Conversely, remedial measures applied upstream may confer both local and downstream benefits. Problems of river basins call for the integration of remedial programs of all areas. However, the authority of remedial and regulatory agencies often ends at political boundaries.

Programs looking toward stabilization of water supply and reduction of siltation and flood crests must begin on the watershed, with soil stabilization and water retardation on agricultural, grazing, and forest lands. One means of reserving upper watersheds for stream regulatory purposes is by purchase for public forests. Perhaps the same end could be attained by strengthening forest zoning. Forest zoning might be fortified by regulations at other than local levels or at a combination of levels. Blocking-in of private forest holdings could be aided by allocation of river basin development funds for the purchase or condemnation of nonconforming tracts to be resold for forestry and recreational uses. At the same time, public recreational values should be protected by zoning regulations similar to those found in two Michigan ordinances which require forest land to remain open to public hunting and fishing. The State is justified in exercising firmer control of rural zoning where State and national investment and interest in rehabilitation is large.

Consideration should also be given to flood-plain zoning. Certainly, residences should be excluded from areas subject to frequent or serious flooding. Annual flood losses might be greatly reduced by restricting such lowlands to general agricultural uses and the more critical areas to grazing. Exercise of the power of eminent domain might be justified for removing from the flood plain structures and uses subject to aggravated flood losses. Again, as in flood-source areas, flood-plain zoning regulations, to be most effective, need to be imposed at a level of government higher than the local level. Maximization of benefits from flood-plain zoning calls for restrictions on land use in all areas subject to periodic damaging inundation, irrespective of local political boundaries. Benefit-cost analysis might be used in making a choice between flood-plain zoning and alternative remedial measures. Such analysis would also be helpful in determining the character of flood-plain zoning regulations to be adopted.

Agricultural Districts

The full potential of the rural zoning technique for protecting the agricultural community and for guiding its growth has not been realized. Frequently the public interest would be better served by preventing unplanned, haphazard, premature suburban development on good agricultural lands. The destruction of the agricultural character of rural communities on the urban fringe often begins by sale of a few small tracts for residential uses. Such parcellation and nonfarm uses are permitted by prevailing farm zoning district regulations. The process continues, bringing with it school and sanitation problems, higher taxes, and, finally, economic and political submergence of the rural community. Perhaps zoning regulations could be designed to prevent such changes until the area is "ripe" for suburbanization. For example, prohibition of nonfarm residences in agricultural zones and the imposition of large-tract minimums would tend to retard parcellation. In other words, use regulations pertaining to agricultural zones might be of a noncumulative character and exclude rather than admit all uses allowed in more restrictive zones. This is a growing practice in industrial zoning districts. Furthermore, statutes prescribing 5-acre minimums in residential-agricultural zones are not infrequent. A Colorado ordinance imposes a minimum of 20 acres for each dwelling unit.

By adequate zoning and related measures, suburban expansion in many communities could no doubt be directed toward the less fertile agricultural lands. The national interest is served by maintaining the food-producing capacity of our soils. We are doing something about soil erosion. Perhaps tomorrow we may find a way to keep the better soils on the expanding urban fringe producing food.

Zoning in Defense Areas

During World War II, rural zoning gave public direction to mushrooming urbanization near newly established or enlarged military installations. The Nation is again mobilizing its resources for defense. Existing military facilities are being reactivated and new facilities established. Industries are being decentralized, and frequently are located in rural towns or in the open countryside. Again the National Defense effort can be materially assisted by zoning direction of the growth of these changing rural communities.

Two statutes pertaining to zoning in defense areas deserve special mention. In 1941, Nebraska created a State zoning agency to coordinate zoning activities in defense areas. The agency was empowered to group cities, villages, counties, or portions thereof, into State zoning districts, whenever a military reservation was, or was about to be, located in such areas. Under this zoning defense law, which is still in effect, the original zoning plan is prepared by the agency and submitted to the local units of government. They may approve the plan as submitted, or may, before adoption, change the zoning plan pertaining to areas under their respective jurisdictions.

The second act referred to was enacted by North Carolina in 1949; it conferred zoning powers upon the Cherry Point Marine Corps Air Station Zoning Commission. The zoning area involved is located in two adjoining counties. The respective county boards are authorized to appoint two members of the zoning commission, and the fifth member is appointed by the commanding officer of the air base. Both planning and legislative powers are granted to the zoning commission. Perhaps this latter act foreshadows coming regional zoning agencies.

Conclusion

In closing, I want to leave a warning and a reminder. Consequential decisions are often made by omission. The character and future development of a rural community, particularly on the changing urban fringe, may be as greatly affected by legislative inaction as by legislative action. Evolving land-use problems in a dynamic rural economy call for affirmative guidance by the community. Only slight protection to its agricultural values is offered by the now frequent provisions in State rural zoning enabling laws exempting agricultural activities from zoning regulations. The tide of change moves by unguided, and decisions vital to the welfare of the rural community are made by inaction--by doing nothing.

Also, again I want to stress that the legal raw materials of zoning--the various types of zoning regulations--were urban-created; that pioneers in the field of rural zoning took these basic raw materials and by adaptation shaped them to serve the rural community, both on the urban fringe and in the open country. Today's new rural problems and goals call for new zoning techniques. As in the past, so in the future, rural zoning will no doubt prove to be a flexible community tool. We may look for further experimentation with rural zoning enabling legislation by State legislatures. We may also look for additional adaptations and innovations in the use of the zoning technique. Rural zoning is still in its youth--its full potentials have not been tapped.

ROADSIDE ZONING*

Problems stemming from the absence of restriction on the uses made of the roadside are almost too well known to need review. Unrestricted commercial exploitation has often resulted, after only a few years, in cluttering the margins of new arterials with scattered and ribbon business and residential developments and with the inevitable billboards. Failure to restrict and regulate roadside development has often meant traffic congestion and reduction in the efficiency of highways, increase in traffic hazards, and spoilation of the countryside.

Roadside protection is the concern of all highway users. The motorist, who largely foots the bill for new roads, is concerned with preserving their traffic-carrying capacity, safety, and appearance. The suburbanite who wants to live in the country is concerned about travel time to his employment, which increases progressively as the approaches to the city become congested. The farmer who uses the highways to move his products to market is concerned about spoilage and increased hauling costs resulting from slowed traffic. The businessman whose merchandise moves to and from his establishment over public highways sees his costs increased by poorer transportation services.

Furthermore, the roadside businessman is concerned about highway protection. Too often, in recent years, his investment has been lost when it became necessary to build new arterials to carry traffic diverted from roadways that became functionally obsolescent from congestion. Finally, businessmen in tourist country which has beauty to sell are concerned about keeping their country easily accessible and attractive.

Techniques for Protecting the Roadside

What are the remedies for checking the spread of the "marginal disease" of highways? Techniques that have been suggested and used fall into two main classes (1) control through acquisition by purchase or condemnation of rights essential to roadside development and (2) control by regulations and restrictions imposed under the police power.

Under the first technique, use of the roadside may be controlled by the taking of a strip of land along the highway in addition to that needed for the roadway. Private use of the margin of the road and access to the road itself is prevented by public ownership of such roadside strips. Sometimes instead of purchasing these strips of land on the road margin

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outright, easements in the strips are acquired. These public easements permit restriction on the use made of the land.

The second class of techniques mentioned is exemplified by zoning regulations and restrictions, platting and subdivision control, billboard regulations, and other devices.

Source of Zoning Authority

Authority to zone comes from the State. Zoning powers usually are conferred by means of enabling laws upon cities, counties, townships, and other units or agencies of government.

Incorporated municipalities, i. e., cities, towns, and villages, are authorized to zone in all but five States. These latter States extend zoning powers only to cities or special classes of cities (1). The coverage is not as complete for rural areas (outside incorporated limits), but much progress has been made in recent years. At present, all counties may zone in 16 States, and certain counties may zone in 15 others. In 12 Northeastern and Lake States, any or designated classes of towns or townships may adopt zoning ordinances. In addition, in 6 States, certain miscellaneous units of government are authorized to zone. However, 10 States remain that do not authorize zoning outside of incorporated limits (2).

Areas that may be Zoned

Enabling laws, besides specifying the units of local government that may pass zoning ordinances, designate the areas that may be zoned and the scope of the regulatory powers that may be exercised. Urban governments are usually authorized to zone the municipality; counties, towns, or townships may zone the unincorporated portions of the territory within their respective jurisdictions. However, some rural zoning enabling laws limit zoning to areas on the periphery of cities, sometimes for stated distances of 1 to 5 miles, or to towns or townships having the higher densities of population.

Another group of enabling laws authorize only roadside zoning. Under these statutes, certain counties in Georgia and Florida are empowered to zone strips ranging from 200 feet to 1,000 yards from the centerline of public roads, State highways, or specified roads (3). Several acts authorize both urban fringe and highway strip zoning (4). And a few empower the county to zone "all lands abutting highways and thoroughfares" (5) or "bordering upon, adjacent to and adjoining state and county roads" (6).

Scope of Regulatory Powers Granted

The usual rural zoning enabling law grants the community comprehensive zoning powers. Four related types of controls are authorized. The first of these, use-regulatory powers, permits the establishment of various types of

zoning districts: residential, commercial, industrial, agricultural, forestry, recreational, and the designation of permitted or prohibited uses within each district. Under the second, the community may restrict the height, number of stories, size, and bulk of buildings and structures. The third authorizes the prescribing of minimum-sized lots or tracts, the percentage of a lot that may be occupied by buildings, the size of side and rear yards, and the setback of buildings from roads. Regulation of density of population, the fourth type of control, is achieved by limitations on the number of families permitted per lot or tract, or per minimum area of ground or floor space, and necessarily may be materially affected by the other three types of controls. Additional grants of power are sometimes conferred, or authority may be more limited. Examples of additional grants of power are those permitting communities to impose building design and color regulations, which are appearing in some enabling laws and zoning ordinances. No doubt the future will bring a material expansion of the constitutionally recognized field of zoning regulations.

Four of the nine urban-fringe or roadside enabling laws examined grant comprehensive zoning powers. Two of these are in Georgia, and two in Florida (7). Two others, an Illinois and an Oklahoma law, limit roadside zoning regulations to the establishment of setback lines (8). Another roadside-protection enabling law pertains only to outdoor advertising structures (9); and the eighth authorizes only limited use regulations (10).

The ninth, another Florida law (11), is one of those innovations that come along occasionally. Under this act, the Duval County Planning Council is "directed, authorized and empowered" to establish highway protective areas, 1,500 feet in depth, along a specified road. The Council is directed to divide the protective areas into five classes of districts--commercial, industrial, residential, recreational, and agricultural--and to establish setback lines not exceeding 25 feet from the edge of the right-of-way. The statute makes it unlawful for any landowner "to locate, lay out, construct, or maintain, any access road" within the protective area, without first obtaining a permit. In the interest of highway safety, the planning council may impose reasonable limitations upon the number of access roads. Also, it may impose reasonable specific conditions and limitations as to their location, grade, and design. Permits to display advertising within the protective areas are also required by this enabling law, and except in commercial zones, only signs of limited size pertaining to uses of the property where displayed are permitted.

These enabling laws fall into two classes: (1) Those granting authority to zone the community as a whole; and (2) those limiting zoning to the roadside.

Rural Zoning Ordinances

The statutes reviewed constitute the framework within which zoning ordinances may be cast. Enabling legislation, however, is not enough.

Ordinances must be adopted that give adequate roadside protection, and then these ordinances must be properly administered.

Area Zoned

The Nation contains more than 3,000 counties; of these, 1,165 are empowered to zone all or a part of their respective unincorporated areas. However, by 1949 only 173 counties in 23 States had adopted zoning ordinances. Although this is a small proportion, rural areas have also been zoned by many town and township ordinances.

Powers Exercised

Under many of these county ordinances, zoning of the roadside is achieved as part of the larger zoning plan. Slightly more than 50 percent of those ordinances examined impose comprehensive zoning regulations. Under these ordinances, various types of use districts are established, building heights are limited, set-back lines are imposed, minimum-sized lots are designated, and density of population regulations are prescribed. Regulations determining use of land and allowed densities of population in areas beyond the roadside corridor have a bearing, though indirect, on traffic problems on the main road.

Of the remaining community-wide county zoning ordinances, only use regulations are imposed by most of one group: the forest-recreational ordinances in the cutover region of the northern Lake States; and use regulations plus a sprinkling of setback controls are effected by another group of ordinances passed by a number of predominantly rural counties (12). Many of the county zoning ordinances also prohibit or restrict outdoor advertising, a growing number require owners or occupants to provide offstreet parking space, and a few in Georgia, Florida, and California, include design control regulations.

Roadside Districts

Roadside-zoning districts have been established in some counties. These districts, which embrace only road-bordering lands, have been created both under special roadside enabling laws and under statutes that authorize county-wide zoning.

Roadside-zoning districts may be grouped into three classes, based primarily on limitations placed on commercial activities. The first is typified by the roadside zones created by a Richmond County, Ga., ordinance, which excludes any and all types of commercial establishments in an area extending 1,000 feet on both sides of certain highways.

The second type is the roadside-service district. Commercial activities in these zones are restricted primarily to business that is necessary for servicing the traffic. Among these are motels and auto courts,

service stations, restaurants and refreshment stands, and some kinds of retail stores.

The third type, the general roadside commercial districts, is designed to serve both the highway traffic and the adjacent population. In addition to highway service activities, these districts usually permit stores for retail business, commercial recreation, and light manufacturing.

Regulations pertaining to each of these three types of districts usually include setback and offstreet parking requirements, limitations on outdoor advertising, and sometimes a measure of control over the design of roadside business buildings.

Considering the scope of the problem, only a beginning has been made in roadside zoning, in terms both of total miles of roadside zoned and of type and stability of regulations imposed. Merely empowering local units of government to pass roadside-zoning regulations (more than half of the counties still lack such authority) does not assure the adoption or enforcement of adequate controls. The community, or its neighbor, may pass inadequate regulations or none at all. Even in areas in which roadsides have been zoned, examples are legion wherein local pressure causes a gradual breakdown of locally imposed and administered regulations. Good roadside zoning frequently ends at a political boundary, but the road passes through.

Effecting Better Roadside Zoning

So much for the past. How can roadside zoning be made more effective in the future? The problem, and the challenge, is one of adapting and revising traditionally local zoning ordinances and techniques, i. e., the general community ordinance and the special roadside ordinance, so as to attain a workable compromise between local and statewide interests. Ways need to be found to make roadside-zoning regulations and administration more responsive to the structure and incidence of existing and realizable benefits. Also, ways need to be found for expanding the use of roadside zoning.

Ways Suggested by Enabling Laws

Suggestions are offered by the various means used by the State for influencing local zoning regulations in unincorporated communities. Six methods were observed in existing rural zoning enabling laws.

The first, and by far the most frequent means employed, is exemplified by the permissive enabling law. Under such laws, the State authorizes designated classes of its rural governments to pass certain types of zoning regulations and expressly or impliedly prohibits other types. The communities empowered may exercise some or all of the authority conferred, or they may decline to zone. Most of the roadside-zoning regulations previously discussed resulted from permissive enabling authority.

The second group of enabling laws are also permissive, like the first, but these laws provide that a State or regional agency shall assist local governments with their planning and zoning problems. The agency selected to furnish such technical guidance can materially influence local zoning regulations, including those that affect the roadside. An interesting example of this type of law is found in Nebraska (13).

In a few enabling laws a third technique is used. These laws affirmatively limit the community's field of choice of zoning regulations. Certain regulations are required if an ordinance is adopted. One example of these statutes is a Florida law that requires a 30-foot setback along named roads (14). Another, an Oklahoma act, prescribes the types of zoning districts that must be created, if the county zones (15).

A fourth method is illustrated by county zoning enabling laws in Michigan and Missouri. These States reserve the right to review and veto. Before a county zoning ordinance becomes effective in Michigan, it must be approved by the State's department of economic development (16). Similar approval is required in Missouri from the State planning board, the commissioner of health, and the chief engineer of the highway commission (17).

A roadside-zoning enabling law mentioned earlier illustrates a fifth approach. This law orders the Duval County Planning Council to zone the roadside along certain highways. Unlike the previous four types discussed, this law is not permissive but mandatory (18).

Under the sixth type of law, local zoning regulations are directly imposed by the State. One example, a Florida law, imposes detailed zoning regulations in a subdivision near Tampa (19).

The laws just described illustrate the means that the States have used in influencing local zoning regulations. These means range from permissive enabling laws to local zoning ordinances adopted by the State.

State Aids to Local Zoning Agencies

New roads have upset long-established land-use patterns in many rural communities. Farmlands have suddenly become valuable for residential, commercial, or industrial uses. These changes in land use, prompted by new roads and the automobile, have brought new problems for officials of highway departments and of rural communities affected. Of major concern to highway officials is the growth of roadside ribbon developments, bringing with it numerous points of access, slowed traffic, and increased hazard. Communities on today's expanded urban fringe may be faced with all the problems stemming from rapid suburbanization. Farther away from the city, the impact is less serious, but the urban populace continues to spread outward.

Highway officials and rural people are seeking solutions to problems stemming from the same cause. Among rural people, the impact of change has caused renewed interest in zoning. New problems and goals have stimulated

a search for and an experimentation with new types of zoning regulations and techniques at both State and local levels.

As a means of stimulating roadside zoning at local levels, an appropriate agency, which in some States could be the State highway commission ^{1/} might well be authorized to make periodic financial grants to local governments to help defray the costs of their zoning agencies. Such aids should be payable whether zoning of the roadside was achieved under community-wide ordinances or under roadside ordinances.

Payment of aids by the State agency necessarily should be predicated upon the local government's compliance with designated minimum standards both as to zoning regulations adopted and as to administration. Minimum regulations required should naturally be varied according to need and class of road. On some classes of roads, desirable regulations might include use regulations restricting commercial and industrial activities to compact areas, setback and offstreet parking requirements, access control, and limitations on outdoor advertising. On other classes of roads, only some of these regulations may be needed, or none may be needed at all. Although detailed zoning regulations are appearing in zoning enabling laws, a better practice in this situation is to grant reasonable discretion in establishing minimum standards to the State agency selected to administer the law and disburse the aids.

Enforcement of zoning regulations in rural areas is often haphazard. Successful enforcement is invariably based on a system of permits and the employment of at least a part-time zoning administrator. Both are essential to the success of the proposed plan. Moreover, if local zoning administrators were required to provide their respective State highway departments or other appropriate agencies with duplicate copies of permits issued that pertain to properties along zoned highways, a current check on local enforcement would be facilitated.

Zoning aids payable to a local government might be based on number of miles of road zoned but graduated by class of road and by adequacy of regulations imposed. Failure to enforce regulations would justify the withdrawal of all zoning aids.

State aids in furtherance of roadside zoning may be justified by the incidence of the resulting benefits. These benefits accrue in large measure to the general public. Investments in roads are protected and safety is enhanced. Roadside landowners, on the other hand, may receive little or no benefits. In fact, their interests may be served by preventing zoning. An

^{1/} Approximately one-half of the States have legal limitations that prohibit the diversion of road funds for nonhighway purposes. Presumably, aids disbursed for roadside zoning would be allotted for a highway purpose.

exception mentioned earlier is the roadside businessman whose investment may be lost when traffic congestion necessitates diversion of traffic to new roads. In contrast, urban merchants may benefit by zoning of the rural roadside.

Roadside zoning will be furthered by an appreciation of the possibilities of that technique for furthering the interests of farmers and other off-the-roadside landowners. Good arterial roads have brought them benefits in the form of easier and quicker access to town and an enhancement of land values. As traffic slows because of increased congestion, travel time increases and values of country residential properties in particular may depreciate.

Much farmland embraced by today's expanded urban fringe may not be ripe for suburbanization for decades. Arterial roads have brought the owners of such lands many benefits but also new problems. Ribbon developments, plus the spreading of an urban populace over the countryside, increase the need for costly public services. Special assessments may be voted by nonfarm landowners for schools, water supply, sewers, or other improvements, and development costs thereby shifted to farmland. Taxes often reflect speculative land values that may never be realized.

Roadside zoning, particularly if combined with adequate rural zoning, can be used by rural communities to restrain these injurious developments. The communities' growth can be guided. Roadside business can be concentrated in villages or in strategic areas. Premature and scattered residential building can be discouraged by limitations on access and by large lot or tract requirements. At the same time, residential growth can be directed toward desirable zoning districts where needed public services are available or can be provided at a lower cost to the communities and their property owners. Arterial roads are an asset to every rural community. Liabilities, when they occur, are often a result of local inaction.

Roadside Zoning by the State

There are those who are impatient with waiting for local units of governments to zone their roadsides, who doubt that the problem can await local recognition of the need. They point out that the need for zoning throughout a community is not geographically uniform, that critical areas most often are found along main highways (particularly on the borders of our cities and towns). These people would like to see the various State highway commissions authorized to zone the roadside, at least along main roads under their respective jurisdictions. The State, they contend, should have ample authority to protect its investment.

Zoning by the State is not entirely new. Mention has been made of a Florida ordinance under which the State imposed detailed zoning regulations in a subdivision near Tampa. More than two decades ago, Wisconsin, by State law, limited the height of buildings in certain classes of cities (20). Various drafts of suggested laws authorizing zoning of the roadside by State

agencies have been prepared and submitted for legislative approval. Perhaps the best known of these is the one sponsored by the American Automobile Association (21), in which broad grant of regulatory power is proposed.

In 1949, the Wisconsin Legislature considered several bills pertaining to roadside protection. Among those passed is a law authorizing the State highway commission to establish not more than 500 miles of controlled-access highways (22) and another requiring approval by that commission of the number and design of entrances to new subdivisions along State truck roads (23). A third bill, proposing roadside zoning by the State highway commission, failed to pass (24).

The initial Wisconsin roadside-zoning bill would have authorized the State highway commission to establish commercial or industrial zoning districts on land abutting State truck highways outside cities and villages, and to specify the kind of trade, commerce, or industry permitted in such districts. Establishment of setback lines was also proposed. In deference to local zoning, the bill provided that existing boundaries within roadside corridors of commercial or industrial districts, established under county or town zoning ordinances, should be accepted as the boundaries of similar State roadside districts. In such coterminous districts, the most restrictive regulations would prevail (25).

The bill ran into trouble. A substitute was introduced which limited authority conferred to the establishment of setback lines. Setbacks of 60 feet from the center line or 20 feet from the nearest right-of-way line, whichever is farther from the highway, were prescribed. However, wider setback lines not exceeding 120 feet from the centerline might be established after public hearing (26). The substitute amendment also failed.

That ended the latest effort in Wisconsin to achieve roadside zoning by the State. After the session was over, a Wisconsin official wondered whether the error lay in asking for too big a package. The bill might have passed, he observed, if initially only authority to establish setback lines had been requested or only limited authority had been asked to zone the most heavily traveled roads. He saw two advantages in that procedure: By dispersing legislation, one disperses opposition; and by getting a start in the right direction, an opportunity is offered to build upon it as the public sees its advantages. It has been said that zoning, in the last analysis, is not the regulation of land, buildings, and structures but, the regulation of people.

Conclusion

Zoning developed in the horse and buggy days and was urban-created. Initial zoning regulations were designed to serve yesterday's urban communities. Later these legal devices were reshaped and adapted to meet new ends, and zoning spread to suburban areas outside city limits and then to the open country. Today's new problems and goals call for the development of new

types of regulations and techniques.

One of today's new problems is found on the roadside. Its condition in many places is no longer a matter of only local concern. The interests of the traveling public, taxpayers, farmers, suburban homeowners, and the State itself are all affected.

Roadside chaos can be prevented by adequate zoning. However, because the benefits from roadside zoning are sometimes largely nonlocal, local action may lag. In such areas, new zoning techniques and agencies may have to be provided to achieve the desired goals.

In some States, financial support of local zoning agencies may be most effective. In others, roadside zoning by the State may be necessary. Or a combination of State and local zoning may be desirable. In devising new roadside zoning techniques, a number of leads may be found in the means used by State legislatures for influencing zoning regulations in unincorporated areas. These means range from permissive enabling legislation to zoning regulations imposed by the state.

Finally, to be effective, any roadside zoning plan, whether under State or local ordinance, must be understood and be accepted by the general public. The public must be convinced of its desirability and advantage: first, in order to get the initial plan adopted, and second, to secure support for its enforcement.

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RURAL ZONING TOOLS AND OBJECTIVES*

New forces of change are transforming the rural community. Good roads and automobiles have spurred yesterday's trek from the city into a flight; they have activated long latent longings for a home in the country. Areas previously remote are today becoming new suburbs. A mass movement from the farm also is underway. Farm people in great numbers are finding employment and new homes in and near urban centers. At the same time, industrial decentralization is bringing new jobs to many peaceful and sometimes forgotten towns, villages, and rural areas.

The scope of the transition is recorded in census reports which reflect population changes during recent decades. In 1930, 62.3 percent of the Nation's continental population lived in 16,477 incorporated places throughout the land. By 1950, the proportion residing in such places had increased to 63.8 percent, an increase of 1.5 percent over 1930; and we had 641 new incorporated places. Presumably many corporate boundaries were expanded during the last three decades. In 1950, then, 96,063,000 people lived in 17,118 places that are or may be subject to zoning regulations of incorporated municipalities.

During the same decades, population changes in unincorporated areas, that is, in areas outside incorporated places, portray the problem confronting rural zoning people. Between 1930 and 1950, the nonfarm population living in unincorporated areas increased by 13,802,000 people, or a surprising 87.5 percent. Only a relatively small proportion of this large increase in nonfarm population in unincorporated areas occurred in urbanized places. The rest was in the open country. Farm population, on the other hand, declined 21.8 percent during the same 30-year period. Of particular interest is the fact that the entire decline in farm population, about 5- $\frac{1}{2}$ million people, and more than 10 million of the increase in nonfarm population in unincorporated areas, occurred during the last decade (fig. 1). In 1950, 54,634,000 people lived in unincorporated areas, that is, in areas where zoning problems are the responsibility of rural units of local government (table 1).

It may seem trite to observe that the changing character of our rural population poses many new problems and at the same time offers many new opportunities for our rural communities, both on the near urban fringe and beyond in the open country.

A New "Topsy"

In yesteryears, many urban centers grew up like Topsy. Today, on every side we see the problems stemming from lack of early guidance. We now have

*Address, National Planning Conference, Detroit, Mich., October 12, 1953. Published by American Society of Planning Officials in "Planning," pp. 163-173, 1953.

TABLE 1.- Population in incorporated places, unincorporated areas, and on farms, United States, 1930-50.

Item	Census year			Increase or decrease 1930-50	
	1950	1940	1930	Number	Percent
Continental total—	150,697,000	131,669,000	122,775,000	27,922,000	22.7
Incorporated places—					
Number of units—	17,118	16,611	16,477	641	3.9
Total population—	96,063,000	81,843,000	76,472,000	19,591,000	25.6
Unincorporated areas :					
Rural open-country—	52,258,000	47,903,000	44,637,000	7,621,000	17.1
Urbanized places—	2,376,000	1,923,000	1,666,000	710,000	42.6
Total population—	54,634,000	49,826,000	46,303,000	8,331,000	18.0
Farm population ^{1/} —	25,058,000	30,547,000	30,529,000	-5,471,000	-21.8
Nonfarm population—	29,576,000	19,279,000	15,774,000	13,802,000	87.5

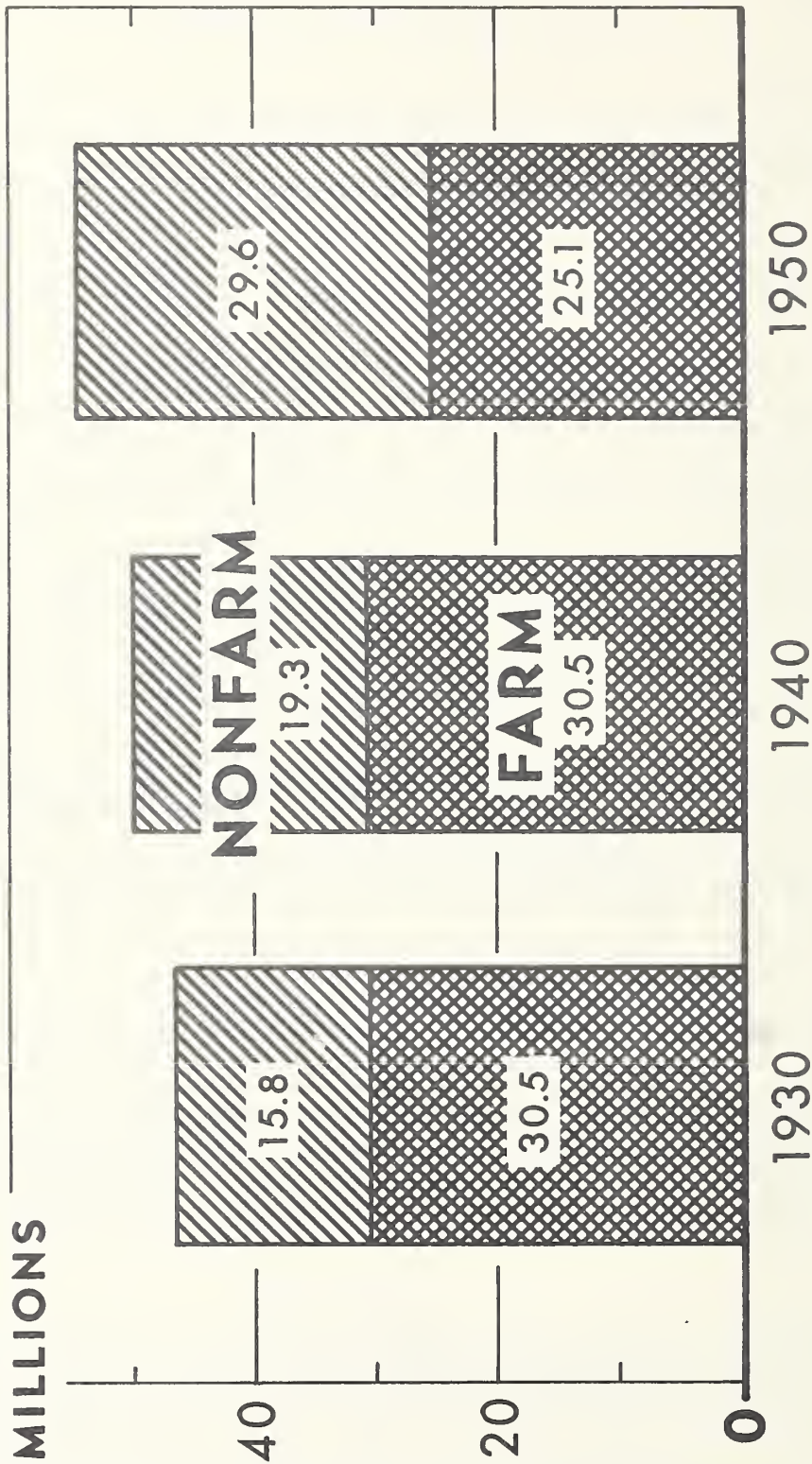
^{1/} Includes for each census year about 300,000 people living on farms in incorporated places and urbanized areas. See Series Census-BAE, No. 16, March 9, 1953 for farm population data.

U. S. Bur. of the Census and Bur. Agr. Econ., USDA.

another fast-growing child—our changing rural community. Shall we let her grow up like yesterday's Topsy? Or, this time, shall we give her the attention and guidance she requires? We now know a lot more than we did three or four decades ago about guiding the growth of our communities. During the passing years, flexible planning and zoning tools have been developed, and a number of rural communities have learned how to use them. The urgent pace of change has swept many rural communities into positions not too different from those faced by incorporated communities several decades ago, when planning and zoning were young.

But what are the rural zoning tools that are available to counties, towns or townships, and what are some of the emerging rural community problems that will respond to zoning guidance? Let us begin by defining zoning, and then examine some of the tools that make up the zoning package. Later we will see how these same tools have been used by counties throughout the Nation to achieve community objectives.

CHANGES IN POPULATION IN UNINCORPORATED AREAS, 1930-50



BUREAU OF THE CENSUS AND BAE DATA

U. S. DEPARTMENT OF AGRICULTURE

NEG. 49400-XX BUREAU OF AGRICULTURAL ECONOMICS

Figure 1

Zoning Tools Available

Zoning is "the regulation by districts under the police power of the height, bulk, and use of buildings, the use of land, and the density of population." ^{1/} This definition embraces the four main groups of zoning tools, namely, regulations and restrictions relating to: (1) The dimensions of buildings and structures; (2) the size and coverage of the building lot or tract; (3) the density of population; and (4) the use of buildings, structures, and land.

The legislatures of 38 States have passed enabling laws granting to counties, towns or townships the power to adopt zoning ordinances. In some States, all counties may zone; in others, all towns or townships. In the remaining States, only designated classes of counties, or towns or townships may pass zoning regulations. In 1951, more than a third of the Nation's 3,000 counties were empowered to zone.

The areas that rural units of government are empowered to zone vary. Usually, they are authorized to zone the unincorporated portion of the territory within their respective boundaries. Sometimes, however, the legislatures have limited such territory to the more populous areas on the urban fringe, or to strips along specified or primary highways.

Enabling laws also define and limit the kinds of zoning regulations that may be passed by local governments. The scope of powers granted differs substantially. About 80 percent of the present rural zoning enabling laws confer the four main types of zoning powers previously mentioned, and the rest limit the authority granted.

Let us examine more closely the four principal kinds of zoning powers usually conferred on rural units of local government. Thereafter, we shall see how these powers have been used and for what purposes. The scope of powers granted is often spelled out in enabling laws in the following language with which you are all familiar:

"For the purpose of promoting health, safety, morals, or the general welfare of the community, the legislative body of (counties, towns or townships) is hereby empowered to regulate and restrict

- (1) the height, number of stories, sizes of buildings and other structures;
- (2) the percentage of lot that may be occupied, the size of yards, courts and other open spaces;
- (3) the density of population; and
- (4) the location and use of buildings, structures and land for trade, industry, residence, or other purposes."

^{1/} Bassett, Zoning 45 (1936).

(Some enabling laws here add: "Recreation, agriculture, grazing, water conservation, and forestry," or some of these.)

Here is a large package of related regulatory powers that may be used to attain a variety of community ends. Most of these powers are useful in populous or intensive land use areas on the urban fringe; only a few are needed in farm or forestry districts. It necessarily follows that many units of rural government neither needed nor exercised all the powers received. Others found each tool useful. Since the authority conferred is permissive rather than mandatory, local governments can choose to use all the powers granted, some of them, according to their needs, or none at all.

Zoning Powers Exercised

How widely have the zoning powers conferred been utilized in unincorporated areas throughout the Nation? I can provide only some figures pertaining to zoning by counties, and these data are not too recent. By 1949, rural zoning ordinances had been adopted by 173 counties in 23 States. Since that time many other counties have zoned, and in numerous towns or townships zoning ordinances are in effect. In 1949, zoning ordinances were in force in about half the counties in California and Wisconsin; in 10 or more counties in Illinois, Indiana, Nebraska, and Virginia; and in 5 or more counties in 7 other States.

Because a county has enacted a zoning ordinance, it does not necessarily follow that the entire county has been zoned. Some counties have zoned only their populous areas, others only their forested areas; and counties with ordinances that apply in both intensive and extensive land use areas often provide for residual districts which are subject only to minor restrictions or to none at all.

The character of the zoning powers exercised in county ordinances varies materially. Some ordinances impose regulations embracing all four of the types of powers authorized, namely: building dimension, building site, use, and density of population regulations; others impose only the use regulations. Various combinations of these regulatory controls also have been employed.

Zoning districts established by the county ordinances examined are of six main types or classes: residential, agricultural, forestry and recreational, commercial, industrial and residual. Each main class contains several subclasses, the agricultural class consisting of general agricultural, residential-agricultural, and country home districts. General agricultural districts are provided for in 50 percent of the ordinances examined.

How have the several counties throughout the Nation used their zoning tools? What tools have they used, and for what ends? Let us begin by examining the rather simple zoning ordinances that were adopted in the middle thirties by a score or so of northern Wisconsin counties, in which only use and population density regulations were applied.

Problems and Remedies on the Forest-Farming Fringe

An era came to an end in the late twenties--the lumbering era of northern Wisconsin. The era opened before 1850 and reached its heyday in the 1890's. It flourished for many decades with the firm expectation that the plow would follow the axe--that farming would follow logging--as had been the case in the rest of the State. But someone had failed to examine the soils. Thousands of acres were not suitable for farming.

Nurtured by the belief that a second dairy empire was promised, a costly pattern of local government was created; young forest growth was not protected from fires, which were considered beneficial because they helped clear the land; colonization by farmers was widely promoted; and many settlers located in isolated places.

The End of an Era

An avalanche of tax delinquency lowered the curtain on the era in the late twenties and early thirties. The deepening depression soon cleared away the farm-it-all confusion, and more realistic uses of cutover lands were sought. It soon became obvious that it was new forests or nothing on thousands of acres of charred stump prairies. The forests must be restored; but there were problems. Cutover lands dedicated to growing trees could not carry the tax load required to maintain the existing local governmental structure. Road and school costs were high because many settlers lived in out-of-the-way places, often on submarginal land, which added to the local relief load and further aggravated the fiscal problem. Land clearing and brush burning by these isolated settlers, in turn, increased the risk of fire in the proposed new forests.

A Coordinated Remedial Program

It became apparent that the problem must be attacked from several angles if the ravaged forests of northern Wisconsin were to be restored. The combined help of private forest landowners and of Federal, State, and local governments was required. A five-point rehabilitation program was effected: (1) Major responsibility for protecting forests from fire was transferred to the State; (2) local road and school aids were provided; (3) the Forest Crop Law, which permits more realistic taxation of timber and cutover land was adopted; (4) counties were empowered to incorporate tax-reverted lands into county forests; and (5) enabling legislation was passed which authorized the counties to set aside forest lands in restricted zoning districts.

In the early and middle thirties many counties in northern Wisconsin were zoned. Large areas of land that were submarginal for farming were enclosed in forestry and recreational districts. Within such zoning districts only forestry, recreation, and certain related uses were permitted. All other uses were prohibited, including the establishment of new farms and new year-round residences.

Necessarily, the hardy individualists who lived in these cutover counties were not prepared to surrender long-cherished and traditional rights without considerable explanation. Educational meetings, not required by the enabling law, were therefore held in each civil town and the aims and purposes of the proposed regulations were explained. At these town meetings the local people who, after all, were most concerned, were encouraged to take part in the planning process and to help draw the boundaries of the suggested zoning districts. Many of these meetings were conducted by our own forum chairman, W. A. Rowlands.

Zoning Objectives Attained

But what were the objectives of these zoning ordinances? Goals were five-fold. First, a major readjustment in the pattern of land use was sought—a separation of forest land from farmland. A second, and closely related objective, was to facilitate the blocking-up of both public and private forest holdings. Since the establishment of new farms and year-long residences was not permitted in the restricted zones, raw land, when offered for sale, necessarily would be acquired only for forestry or for recreational purposes. The ordinances also helped to work a change in the county land sale policies. Traditionally, counties had offered tax-forfeited lands to any buyer regardless of the proposed use. After zoning, tax-reverted forest lands within restricted districts necessarily were either added to county forests or sold for forestry purposes. A place had been found for tax-delinquent forest land, and it was no longer a drug on the land market.

Other objectives of the zoning ordinances were to prevent the wasting of labor and capital on barren land and, instead, to guide prospective farmers to better soils in established farm communities; to reduce the hazards to the new forests from clearing and brush-burning fires; and to decrease outlays by local governments for roads, schools, and other services.

Preventing new farm settlement on barren land helped to attain all five of the community's goals, but existing isolated settlers, who were nonconforming users, had a vested right to remain. These settlers, therefore, were bought out by individuals, corporations, and counties who were blocking-up forest holdings; by the Federal Government under its submarginal land purchase program; or their places were exchanged for better county-owned tax-reverted land in established communities.

Following such relocation, roads and schools that were no longer needed were closed, and the savings incurred permitted a reduction in taxes. As the settlers moved out of the woods, forest fire occurrences in forest and recreational zoning districts became less and less frequent, and during recent years, as is indicated by a late study, such fires were clustered around population centers in unrestricted areas.

Zoning Tools Employed

The accomplishments of rural zoning in Wisconsin cutover counties cannot be fully appreciated unless one is conversant with the conditions that prevailed prior to the ordinances. These counties were areas of chaotic and maladjusted land uses, the heritage of an abortive colonization era. The mistakes of yesterday needed to be undone and guidelines provided for molding the future. What were the zoning tools employed to achieve this transformation? Only two--restrictions on the future use of land and buildings, and regulations for preventing a wasteful scattering of population. A more conventional use of zoning tools, as you know, is to prevent an undue concentration of population.

Today in northern Wisconsin new community problems and goals are prompting a revision of early zoning ordinances. Additional zoning tools are being employed. Suburban and industrial growth calls for community guidance; economic suffocation of highways requires attention; and an expanded and valuable recreational industry needs protection. Communities with natural beauty to sell are finding that good roads also lead to more remote playgrounds.

Zoning Problems in Our Changing Rural Communities

We have examined the use of zoning tools in an extensive land use area--the forest-farming fringe in northern Wisconsin. The emerging problems of our new Topsy--our intensive land use areas on the urban fringe and beyond for many miles into open farming country--are quite different. Other rural zoning tools are available to allay her growing pains.

Zoning is both a negative and a positive force. It is negative or preventive insofar as it is used to check undesirable tendencies. It is essentially a positive force, in that it looks mainly to the future. Its purpose has been said to be to conserve the future. A zoning ordinance for an established community must recognize existing conditions and make the best of past mistakes. But, building upon the present, it can start a plan to mold the community's future. In other words, zoning, as has often been stressed, generally does not operate retroactively.

The urban fringe and the countryside beyond is in transition. In many areas the new pattern has not set, but it is "later than you think." The time for applying needed planning and zoning guidance has arrived. Tomorrow may be too late. If timely action is taken before new patterns of land use are established, zoning tools can be most effective. Visible on every side are the emerging problems: tax and fiscal headaches for tomorrow; troublesome future maladjustments in land use stemming from rapid growth and haphazard location of residences, commerce, and industry; economic suffocation of highways, often accelerated by ribbon business development; and a declining agriculture as a result of parcellation of fertile farmland for scattered rural residential uses, with the familiar associated idle acres and rising taxes.

Rural people do not have to sit idly by and permit the haphazard forces of change to shape their communities of tomorrow. Planning and zoning tools are available and may be used to help create a brighter future. Among the zoning tools that are most useful for guiding community growth and for promoting the fullest use of natural resources, both farm and nonfarm, is the power to create various types of zoning districts.

Necessarily, the first step in the zoning process, after comprehensive planning, is to divide the community into suitable and appropriate zoning districts—industrial, commercial, residential, agricultural, and so on. Thereafter, regulations differing by districts are applied. The types of districts created and the regulations adopted should, of course, be tailored to the needs of the particular community. Usually, an appropriate place can be found for every type of land use desired. Because communities differ, a zoning ordinance would not be borrowed from a neighbor.

Protect New Economic Base

Let us begin with the land needs of industry. In this age of industrial decentralization, it seems advisable for rapidly changing rural communities to set aside and protect suitable and adequate areas for what may become an important, if not the primary, base of their new economic life. However, the community must guard against overzoning for industry. Existing county ordinances that were examined indicate that about one-half created one type of industrial district. The other half of the ordinances established two types, namely, heavy and light industrial zones. Noxious trades were often relegated to residual districts.

County zoning ordinances invariably exclude industries from residential districts, but only about a dozen ordinances excluded homes from industrial zones, except for watchmen's cottages. Failure to exclude residences from industrial districts seems rather illogical both from the standpoint of public health and safety and from the point of view of future industrial land requirements.

Exclusion of residences but not of farms from industrial districts is often justified by the line of reasoning that a landowner in an industrial zone must be permitted some use of his land before it is needed for industry. If the land is being used for farming, the cost of later acquisition for industrial expansion is not likely to be excessive; however, if the same land, not yet needed for industry, is crowded with houses, (a situation which may be accentuated by overzoning for industry), the cost of later purchase for industry may be prohibitive. As a result, the industry that is denied room may move out into the open country where more space is available.

Encourage New Trends

A few words also need to be said about commercial zoning districts. New commercial areas necessarily are needed in growing rural communities, but what kind and where? Too often ribbon business districts are permitted to

develop along main highways, or business units are allowed to spread over a wide area, resulting in a mixture of stores, gas stations, residences, and vacant lots. Both types of business zones are equally unrealistic. The ribbon business development causes traffic congestion, increases road hazards, decreases the carrying capacity of highways, and eventually the taxpayer is called upon to foot the bill for highway relocation. As a result of such relocation, businessmen along the old road often incur grave economic losses. Widely dispersed business areas also add to the fiscal problems of the community and its taxpayers. Streets containing business units, even if scattered, usually must be wider and costlier than residential streets, sewers often must be enlarged, and the cost of police protection and other needed public services is increased.

Zoning tools might well be used to encourage present trends toward modern shopping centers which are springing up all over the Nation. Customers apparently are attracted to these bright, compact business areas containing a variety of shops and providing space for off-street parking.

Need to Guide Residential Growth

Perhaps the changing rural community can reap its greatest reward by using zoning tools to guide residential growth. By timely zoning and subdivision control, the efficient handmaiden of zoning, a pattern can be set that can materially lessen future maladjustments in land use. Suitable and attractive areas can be enclosed in various types of residential districts and thereafter protected from the encroachment of distracting land uses. By setting a pattern for the future, savings can be effected in outlays for roads and streets, water and sanitary facilities, schools and school services, police and fire protection, and other public and semipublic services.

Zoning tools may be employed both to prevent a wasteful scattering of population and to forestall undue concentration or overcrowding. Among the most useful techniques for checking unwise overcrowding are the creation of various classes of residential districts—one-family, two-family, and so on; the designation of various sizes of building lots and tracts; the prescribing within reason of minimum ground area or living floor space; limitation on the percentage of the lot that may be covered by buildings; and restrictions as to height, number of stories, or bulk of buildings. The community may use all or only some of these controls as needed.

A community may have many reasons for regulating population densities. It may want to equate such densities to existing public service facilities, including water supplies, sewers, roads, streets, and schools. In areas where wells and septic tanks are in use, lower densities may be advisable for sanitary reasons, or the community may want to prevent the creation of rural slums. In this motor age, leaving in its wake an urban populace spread over the countryside, the formation of rural slums, with their multiple problems, is ever threatening.

The community may want to prevent premature parcellation of its best agricultural lands for nonfarm homesites, with benefit to all concerned. Home-seekers, instead of scattering over the countryside, can be directed toward desirable residential zoning districts where service facilities are available or can be more readily provided. Too often, perhaps, the urge for a home in the country stems partly from past failures of our cities to make the most of their zoning tools.

Zoning regulations that limit densities of population necessarily have a bearing on public health and safety. Moreover, the impacts of overcrowding on morals, including juvenile crime rates, are well known. Also, in many ways the general welfare of the community is enhanced by well-spaced housing. Finally, but of urgent importance to our changing rural communities, property values and the tax base are protected by a wise use of zoning tools for regulating densities of population.

Protect Established Farm Communities

There remains the role of rural zoning in protecting and preserving agricultural values, including food production potentials for the near and distant future. As was mentioned earlier, farm zoning districts created by many county zoning ordinances have been of three types: Country home, residential-agricultural, and general agricultural districts. The first two of these, as the titles suggest, are usually designed primarily for country residential purposes. The third type, general agricultural zoning districts, has been established by 50 percent of the county zoning ordinances from 23 States examined by the writer. Zoning restrictions on farming activities in such districts are infrequent, except for regulations pertaining to farms for the disposal of garbage and offal, hog ranches, and livestock feeding and sales yards. In fact, agricultural activities are exempted from zoning regulations by the rural zoning enabling statutes of 17 States. Nonagricultural land uses in farm zoning districts, however, are frequently restricted for the benefit of the farm community.

The variety of commercial activities permitted in agricultural zoning districts is usually very limited. The same applies to industries, except for the processing of agricultural products and minerals or other natural resources indigenous to the county. These latter kinds of industrial activities are quite often permitted in general agricultural zoning districts.

Reserve Fertile Soils to Grow Food

Zoning developed in crowded cities. Its basic regulations were shaped for urban ends. Later, building on this urban-created base, zoning regulations and techniques were developed for intensive land-use areas on the near-urban fringe, and then for open-country areas. We have observed how zoning tools have been used to attain two basic objectives in the open country: (1) To further the rehabilitation of the cutover region in Wisconsin, and (2) to

protect established farming areas from the encroachment of objectionable activities.

Today, a new challenge faces rural zoning on the enlarged urban fringe. This challenge, which needs to be met, is to reserve the better farmlands in our changing rural communities for purposes of growing food. Somehow, and in the long run, a community does not seem to be promoting the fullest use of natural resources when it permits houses to grow on fertile valley lands and farmers to be slowly pushed onto the less productive hills. It seems that the hills would be more suitable for homesites than for farms.

Can zoning meet the new challenge, even with the help of the best planning, platting regulations, tax reform, and other measures? Have we the zoning tools necessary to do the job, or will we have to develop new types of zoning regulations and techniques? Possibly the time has come to reexamine critically the whole package of zoning tools, in light of the forces that are now shaping new patterns of land use and new kinds of urbanized areas in our changing rural communities.

Let us explore some of the zoning techniques that have been used in the past in attempts to save good farmland, or at least to retard premature parcelation. One of these devices is to enclose agricultural areas within farm zoning districts and to exclude therefrom most activities that are not closely related to agriculture. But nonfarm residences have been allowed in such districts which permitted parcelation for nonfarm use to occur.

In an effort partially to close this door, another zoning tool has been used--minimum lot or tract regulations. Sizable minimums ranging upwards to 5 acres have been prescribed, and in an airport zoning district in Colorado (in the interest of safety), 20-acre minimums were established. No doubt, large minimum tract requirements have had an influence in some districts in retarding premature parcelation for nonfarm residential uses. Recently, it has been suggested that the establishment of maximum tract sizes, as well as minimums, might be useful devices in appropriate zoning districts to retard the breaking up of good farms and, incidentally, to reduce the proportion of the acreage in the tracts sold off that often lies idle for many years.

More far-reaching zoning measures for reserving the better soils for farming have been proposed in a California county. The technique there suggested is to set aside agricultural lands in farm zoning districts in which only agriculture, some related activities, and certain public and semipublic uses would be permitted, with all other uses, including subdivision for homesites, prohibited. Land in such districts would be divisible only into tracts containing no less than 5 acres.

No doubt the future will bring further adaptations in the use of conventional zoning tools and, perhaps, new types of regulations. Emerging problems and goals call for new techniques. An experimental beginning with zoning by the State has occurred in a community near Tampa, Fla. Perhaps we will see more zoning at higher levels of government or by regional agencies where

a large proportion of the benefits from such zoning accrues to the general public, and where local governments are unwilling or unable to cope with the problem. Illustrative situations are our cluttered roadsides and our flood-ravaged river valleys where problem areas cut across the boundaries of local zoning units. Another example is the fertile farmland we have been talking about, which might be beneficially reserved for growing food and for open spaces on our changing and enlarged urban fringe.

SHALL OUR BETTER SOILS GROW CROPS OR HOUSES?*

In the early years of our country's development, incorporated communities depended upon the countryside for sustenance. At the same time, a large influx of people from rural areas was contributing to the growth of our cities. In recent decades, some of the earlier trends have been greatly modified or even reversed. We now find that because of the ease with which barriers of distance have been overcome by our present-day system of good roads and motor transportation, it is possible and convenient to enjoy rural living and to commute to places of employment in the city. Or, we find that in many instances, places of employment are being brought into rural areas and are drawing for personnel upon the local resident labor force.

Motor transportation, a new force that is shaping the growth of our cities, has brought us sprawling metropolitan areas of new commercial and industrial districts on the urban fringe, bedroom suburbs, scattered rural residences, and part-time farms. As a result, we find the urban populace looking to the countryside for living and working space as well as for sustenance.

Expansion of the urban fringe usually does not proceed outward uniformly from city boundaries; generally, it radiates out along highways. Sometimes suburban development tends to "leap-frog" over suitable land nearer the city to create residential islands or pockets in farm communities further out.

Beyond this so-called "limited" urban fringe is a second fringe area that has been called the "extended" urban fringe. Into this agricultural hinterland, urban-oriented people have penetrated for many miles to establish country homes, and residential and part-time farms. Here again, as on the limited urban fringe, there is competition for use of the better agricultural lands to grow crops or to grow houses.

Increase in Rural Nonfarm Population

One measure of the scope of movement to the countryside is found in trends in distribution of population in unincorporated areas in recent decades. From 1930 to 1950, the rural nonfarm population in unincorporated areas throughout the country increased by 13.8 million people. This was an increase of 87.5 percent. In these two decades, the residential farm population—people living on farms that provide incomes of less than \$250 from sale of farm products—increased by 1.4 million persons, or 56.4 percent. These decades also brought

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an increase of 953,000 in the number of people living on part-time farms—those that provide incomes of between \$250 and \$1,200 from sale of products and whose operators work more than 100 days off the farm. The commercial farm population of the country, on the other hand, declined by 7.8 million in the 20 years (table 1).

In 1950, 36 million people lived in unincorporated areas on premises that are not classed as commercial farms. The proportion of the total population in unincorporated areas not residing on commercial farms increased from 42.9 percent in 1930 to 66 percent in 1950.

Better Agricultural Lands Lost to Farming

What does this transformation mean in terms of competing uses for rural land? City boundaries are expanding and, as we have seen, population densities are increasing on the limited and extended urban fringes. Many fertile acres are lost to agriculture annually through use as nonfarm living and working space. In the last decade, an average of 660,000 new families, urban and rural, were formed each year. Living, transportation, and working space for urban people and for farmers requires an estimated 1.4 acres per family. The average for farmers includes the farmstead but not the farm. On this basis, approximately 924,000 additional acres are needed annually for these purposes. In selecting this acreage, level lands most suitable for farming are often picked first. There is also a danger that premature parcellation for nonfarm uses will break up efficient, mechanized farm units.

Land must be found to accommodate this urban and suburban expansion. But care should be taken in selecting the land to be used for this expansion.

TABLE 1.—Trends in distribution of population in unincorporated areas, United States, 1930-50.

Classes	1950	1940	1930	Increase or decrease	
	Number	Number	Number	Number	Percent
Nonfarm	29,576,000	19,279,000	15,774,000	13,802,000	87.5
Residential farm	3,916,000	3,583,000	2,504,000	1,412,000	56.4
Part-time farm	2,553,000	2,041,000	1,600,000	953,000	59.6
Subtotal	36,045,000	24,903,000	19,878,000	16,167,000	81.3
Commercial farm ^{1/}	18,589,000	24,923,000	26,425,000	- 7,836,000	-29.7
Total	54,634,000	49,826,000	46,303,000	8,331,000	18.0

^{1/} Total farm population less residential and part-time farm. See Series Census-BAE, No. 16, Mar. 9, 1953. Unpublished estimates, Bur. Agr. Econ. USDA.

Are we wise when we continue to build houses and factories on our better farmland and ultimately push our farmers up on the less productive hill slopes? We may not miss these good farmlands for a few years, but what about our agricultural needs 25 or 50 years hence? Even now, people in California, Connecticut, Maryland, New Jersey, Utah, and other States are becoming concerned about the absorption of their good farmlands into nonfarm uses.

Flexible Transportation Facilitates Remedy

The development of modern motor transportation largely caused this problem. But the flexibility of motor transportation can help us remedy it. A few more miles on modern roads are no longer of great moment. Modern transportation allows the community a larger area of choice for allocating the more fertile soils for farming, the less fertile land for housing developments, and so on. And the same modern motor transportation facilitates the development of attractive dispersed urban communities with adequate open spaces--communities that would also be less vulnerable in the event of war.

In closing, I shall leave one question with you. When, and if, we enter the "helicopter age," or when other major advances in transportation occur, will it be wise to continue the absorption of our good farmlands for nonfarm uses on an even larger urban fringe?

SOME LIMITATIONS AND POSSIBILITIES OF RURAL ZONING*

Thirty-eight States have passed enabling laws authorizing any or designating classes of counties, towns or townships, or other local units of rural government to adopt zoning ordinances. Slightly more than a third of the country's 3,000 counties are empowered to zone. By 1949, rural zoning ordinances had been adopted by 173 counties in 23 States, and also by many townships.

Zoning has been used successfully to attain a variety of community ends:

- (1) To promote the rehabilitation of the cutover counties in Wisconsin and other States;
- (2) To protect highways from economic suffocation, particularly in Florida;
- (3) To guide community growth on urban fringes;
- (4) To preserve the amenities of residential districts;
- (5) To protect farm communities in many States from disrupting activities and, more recently, in California and a few other States;
- (6) To preserve the better agricultural lands for farming.

Basic Components of Zoning

Considering the range of zoning accomplishments, why hasn't zoning been used by more rural governments? Also, why haven't zoning tools been used to attain other and wider public ends? Answers to these questions will be more easily found if we first explore several basic components of zoning. These are the various types of regulatory tools that comprise the zoning bundle; the incidence of the benefits that stem from the various types of zoning regulations; and the types and levels of governments that are empowered to adopt zoning ordinances.

Types of Regulations

Bassett, a well-known zoning authority, has defined zoning as the regulation by districts under the police power of the height, bulk, and use of buildings, the use of land, and the density of population. The zoning package often includes the following four main groups of zoning tools:

*Presented at the Mid-Century Conference on Resources for the Future, before Section I, Subsection A - "Competing Demands for Urban Land," Washington, D. C., December 2-4, 1953. Selected excerpts were published in "The Nation Looks at its Resources, Report of the Mid-Century Conference on Resources for the Future," pp. 56-57, Resources for the Future, Inc., November, 1954.

- (1) Regulations and restrictions relating to the dimensions of buildings and structures, such as height, number of stories, and size;
- (2) Regulations and restrictions relating to the size and coverage of the building lot or tract, including front, rear, and side setback lines;
- (3) Regulations and restrictions to avoid either an undue concentration, or a wasteful scattering of population; and
- (4) Last and most important, regulations and restrictions relating to the location and use of buildings, structures and land for trade, industry, residence, agriculture, forestry, recreation, or other purposes.

Zoning powers are permissive rather than mandatory. Local governments can choose to use all the powers granted, a part of them, or none at all, according to their needs.

Incidence of Benefits

We come now to the incidence of the benefits that result from the different types of zoning regulations. Who, or what groups, are likely to benefit from each permissible type of regulation?

Benefits from zoning regulations may be primarily local; they may be communitywide; or they may be Statewide or regional depending on the scope and character of the regulations. An example of zoning regulations with mainly local benefits are use, lot area, building height, and density limitations pertaining to a one-family residential district. Here the regulations imposed have a direct impact on the amenities of the neighborhood properties. Of course, the interest of society remains in the background; it is affected if violations are likely to cause hazards to health, safety, morals, or the general welfare.

Certain types of zoning regulations confer benefits that are Statewide or wider with lesser and sometimes no advantage to the local neighborhood or its landowners. For example, roadside zoning regulations may include restrictions on or prohibitions of commercial uses and outdoor advertising, and they may impose setback and access controls. Roadside zoning preserves the safety and traffic-carrying capacity of highways, and the attractiveness of the countryside. Its benefits accrue primarily to the traveling public. The local community benefits also, but the interest of landowners adjoining the road may often conflict with the interests of the traveling public.

A comparable distribution of zoning benefits may be conferred by the establishment of watershed and forest zoning districts in the headwaters of our river systems. Benefits from such upstream zoning that accrue to forest landowners result primarily from lessened fire and trespass hazards and from lower taxes. Other benefits are stabilization of streamflows and water supply, and reduction of flood crests and silt flow. These benefits accrue primarily to downstream water users and to occupants of the flood plain—that is, to

people living outside the area that is zoned. Urban water users are sometimes the principal beneficiaries of regulations that restrict the use of land in watershed zoning districts.

Many of the zoning benefits from reserving the better soils for farming on our growing urban fringe are likely to accrue to the State and Nation as a whole. Certainly, owners of farmland will benefit also, if the local tax structure permits, and so will processing industries in the local community. However, if we look toward the not too distant future, we may find that the greater part of the benefits may be regional and nationwide.

Ordinances Usually a Local Product

I shall here make further brief mention of the levels of rural governments that normally enact the zoning ordinances. Although the incidence of zoning benefits may be local, regional, statewide, or greater, depending upon the character of the regulations adopted, zoning authority customarily is vested by the State in local governments. Sometimes, also, zoning authority is limited geographically to the more populous areas and functionally by implicit or expressed restrictions on the powers that may be exercised. North Carolina has made a beginning with zoning by a regional agency that embraces portions of two counties and a municipality. A start has been made in Florida with zoning by the State.

Reasons for Limited Use of Zoning

Return to our original question - Why hasn't zoning been used by more rural governments? And why haven't zoning tools been used to attain other and wider public ends? —no doubt my discussion will suggest several answers. The zoning package, as we have seen, includes four main groups of zoning powers from which individual tools may be selected to attain a variety of ends. Although the grant of zoning authority is permissive and the community may choose the tools it wants to use, this fact is not fully understood by many people.

Then there is the pattern of the incidence of benefits from the various types of zoning regulations which may promote conflicting interests and pressures. Also, the primarily local governments authorized to zone, as well as their number and size, have precluded the use of zoning tools in achieving wider public ends.

A few other reasons should be mentioned. Chief of these are the pressure of local property taxes and the general inability to equate such taxes with desirable zoning district patterns. An additional factor is the position of nonconforming properties in zoning law. Finally, there is frequent failure to take appropriate action in time.

How Encourage Wider Use of Zoning?

There remains the major question, what should be done to encourage a wider use of rural zoning techniques? It should be noted that police power, of which zoning is a component, resides in the several States. Also, local units of government receive their zoning powers from their respective States. In the enabling laws that confer zoning authority, the States have used different techniques to influence zoning regulations in local areas, and these suggest some answers to our questions:

The usual means employed is the granting of permissive zoning powers, which may be either narrow or broad.

Some States confer permissive powers and, in addition, designate a public agency to help local governments prepare a comprehensive community plan and the zoning ordinance.

A few States affirmatively limit the field of permissive choice, by requiring the community, if it zones, to impose regulations of a designated character.

Two States reserve to the State the right to review and to overrule local zoning regulations.

A more far-reaching approach, which is used in one State enabling law, is both to empower and to direct the community to zone.

In one instance, the State itself directly imposes the zoning regulations.

To summarize briefly, under the first four alternatives, the final word remains with the local community, which may decline to zone. The final decision under the two remaining laws is made at the State level.

Guidelines for Adaptation

Are we ready to adapt existing zoning tools to attain larger public ends, as for example:

- (1) To protect our highways?
- (2) To reserve our better farmland for growing food and fiber?
- (3) To protect flood plains in river valleys?
- (4) To stabilize land use on our grazing-farming fringe?
- (5) To assure a continued supply of farm and forest raw materials for industries established to process local products?

When exploring new avenues of zoning adaptation to further these ends, a few guidelines may be considered. It is suggested that the legislative

authority of the zoning agency, in appropriate instances, may well embrace the entire problem area. This suggests, in some instances, zoning at State levels, or at intrastate or interstate regional levels. Second, the zoning agency need receive or exercise only those powers that are required to do the particular job, leaving the remainder of the zoning field to existing agencies. In other words, the zoning powers granted or used need to be comprehensive geographically but limited functionally. Finally, the functional zoning powers needed by the suggested agencies are usually only those from which the incidence of zoning benefits is primarily regional, statewide, or wider.

SOME AGRICULTURAL ZONING PROBLEMS*

When Mr. Alcorn wired 3 weeks ago, he asked me to discuss some agricultural zoning problems. That general subject has given me a wide field of choice. After all, there are plenty of farm zoning problems. There are the problems that stem from the inadequacy of urban-shaped zoning tools. There are the problems that are caused by lack of understanding of agricultural zoning and its objectives. There are the conflicts between levels of zoning and the incidence of zoning benefits. There is the confusion that is caused by the lack of, or failure to live by, an overall community plan. Closely related are the tensions caused by the frequent lack of relation between rural zoning objectives and community policies and programs, including tax measures, subdivision regulation, highway location, and public improvements.

Intense Competition for Land

Then there are the many agricultural zoning problems that stem from an explosive urban expansion. This urban dispersal has created an intense competition for land for houses, shopping, industry, services, recreation, open space, and farming. I placed farming last in the array, not because it belongs there, but because an urban-oriented society frequently considers agriculture as the residual land use. As a consequence, in allocating land for nonfarm uses, we often look at only a corner of the problem. Often we take the most fertile acres for nonfarm purposes, even when alternative space is available. Apparently, we forget that fertile soils, together with water, are the bases for an efficient agricultural plant and that sterile acres are marginal for farming. In our eagerness for new industry and urban growth, we often overlook the possibility, when alternative sites are available, of having urban industrial development and farming too. California's bountiful agriculture is based on 12.4 million acres of classes I, II, and III land. These acres contain the State's most fertile soils - soils that are suitable for regular cultivation. The total land area of California exceeds 100 million acres.

Do We Want Farming Too

As I see it, the greatest present hindrance to agricultural zoning in many States is the uncertainty in the minds of people as to whether they want urban growth and farming too. When and if the people decide that they want farming too, the destruction of fertile farmlands, when other lands are available, is not likely to be long tolerated. When that basic decision has been made, the other agricultural zoning problems mentioned, including problems that stem from poorly adapted zoning tools, from unrealistic taxation, and from an ill-advised location of public improvements may soon be resolved.

*Address, Agricultural Section, Commonwealth Club, San Francisco, June 16, 1955. [Not Published.]

Uncertainty Resolved in Wisconsin

If we look backward three decades or so to early rural zoning years in Wisconsin, we can find a parallel period of uncertainty. Fortunately, that uncertainty was ended when a desperate people made a basic decision. They decided to grow new forests on millions of cutover acres that were not suited to farming. This decision fathered new rural zoning regulations and techniques; cleared the way for more equitable forest taxation; and prompted the State to take a necessary strong hand in protecting the new forests from fire and in encouraging better forest management. Let us examine briefly these early years of zoning in Wisconsin. In the process, we can draw some parallels and contrasts.

In the late twenties an era came to an end — the lumbering era of northern Wisconsin. The era opened before 1850 and reached its heyday in the 1890's. It flourished for many decades with the firm expectation that the plow would follow the axe — that farming would follow logging — as had been the case in the rest of the State. Nurtured by the belief that a second dairy empire was promised in the northern part of the State, a costly pattern of local government was created; young forest growth was not protected from fires, which were considered beneficial because they helped to clear the land; and farm settlement was widely promoted by land and logging companies, speculators, railroads, counties, and the State. During this abortive colonization period, many settlers located in isolated places. But someone had failed to examine the soils, or rather had refused to believe what they saw. Thousands of acres were not suitable for farming.

The dream was soon to end. An avalanche of tax delinquency lowered the curtain on the era in the late twenties and early thirties. The deepening depression soon cleared away the farm-it-all confusion, and more realistic uses for cutover lands were sought. It became obvious that it was new forests or nothing on thousands of acres of charred stump prairies. In a period of crisis, the people of Wisconsin made their decision: the forests must be restored. But there were many problems ahead.

State Lends a Strong Hand

The promised new forests needed better protection from fire than could be provided or paid for at the accustomed town or township level. Major responsibility for forest protection therefore, was transferred to the State. Cutover lands dedicated to growing trees could not carry the taxload required to maintain the existing local governmental structure, which had been designed for an expected farm economy rather than a forest economy. Also, road and school costs were high because many settlers lived in out-of-the-way places, often on land that was submarginal for farming. Here the solution was three-fold: (1) A new forest tax law, administered at the State level, was passed, which taxes forest growth as a long-term crop, instead of annually on its "wrecking" value; (2) local road and school aids were provided by the State; and (3) isolated settlers were induced to move out of the woods.

A third problem was a chaotic pattern of land use. Forest lands needed to be blocked-up into suitable operating units. To encourage this end, two laws were passed. One empowered the counties to incorporate tax-forfeited lands into county forests; the other authorized counties to pass forest-recreational zoning districts.

Zoning Operated Retroactively

Before discussing the zoning ordinances that were adopted by Wisconsin's cutover counties, I would like to call your attention to the operative environment of zoning in these counties. Forest zoning in Wisconsin operated in areas of chaotic land use maladjustments. The role of zoning, therefore, was not the usual one of maintaining the status quo, as is the case in agricultural areas when zoning is applied in time.

Moreover, forest zoning in the cutover counties was only one of the several laws previously mentioned, the objective of which as a group was to restore forest resources. The attainments of zoning in this law complex were in fact retroactive. Zoning operated ratchetlike to hold the gains in the land use pattern resulting from other laws and programs. By way of contrast, agricultural zoning normally does not operate retroactively, and such zoning is too infrequently supported by laws that permit realistic taxation of farm properties.

Now let us return to the forest zoning ordinances in the northern counties of Wisconsin. Large areas of land that were submarginal for farming were enclosed in forestry and recreational zoning districts. Within these zoning districts, only forestry, recreation, and certain related uses were permitted. All other uses were prohibited, including establishment of new farms and new year-round residences. What were the zoning tools employed? Only two — restrictions on the future use of land and buildings, and regulations to prevent a wasteful scattering of population. Both zoning tools were used in unaccustomed ways to serve new ends. Zoning regulation of land use in cutover forest areas was untried, as was the creation of exclusive forest-recreational districts in which even farming was prohibited. New also was the exercise of zoning regulations, to prevent a wasteful scattering of population. A more conventional reason for invoking such regulations is to prevent an undue concentration of population.

Necessities of time and place prompted Wisconsin zoning pioneers to reshape and adapt urban-created zoning techniques to help attain new community objectives. Among these objectives were the separation of forest land from farmland; the facilitation of the blocking-up of public and private forests; the prevention of the waste of labor and capital on barren land and the guiding of prospective farmers to better soils in established farm communities; the reduction of hazards to the new forests from clearing and brush-burning fires; and the reduction of outlays of local governments for roads, schools, and other services.

Zoning Tools Need Reshaping

With this discussion of forest zoning as a background, let us examine some typical agricultural zoning district regulations. Here again, zoning agencies started with urban-created zoning tools but adaption to serve agricultural ends has been less pronounced. The typical general agricultural zoning district is cumulative rather than exclusive. That is, all uses that are allowed in more restrictive one-family residential districts are also permitted in the agricultural zone and, in addition, agricultural uses are permitted. Or, stated in general terms, districts of less restricted uses admit the uses of the more restricted zones. Objectionable and unwanted commercial and industrial activities, however, are often prohibited in agricultural zones.

Can agricultural zoning districts that permit nonfarm homes plus farming be relied upon to protect the farm community? I doubt it. The destruction of the agricultural character of rural communities often begins by sale of a few small tracts for residential uses. The process continues, bringing with it school and sanitation problems, higher taxes, and finally economic and political submergence of the rural community. Obviously, the more fertile soils will not be protected by such zoning tools. By way of contrast, the exclusive forest-recreational zoning districts in Wisconsin operated retroactively to improve forest land use patterns and to reduce the cost of local government.

Exclusive Farm Zoning Districts

Recently, several California counties have sharpened their agricultural district zoning tools. These counties have set aside fertile agricultural land in exclusive farm zoning districts in which only agriculture, some related activities, and certain public and semipublic uses are permitted, with all other uses, including subdivision for homesites, prohibited. Land in such districts is divisible only into tracts that contain no less than 3 acres, or in some cases 5 acres.

Large-lot minimums applied in these districts serve to prevent a wasteful scattering of nonfarm people, which in turn reduces the need for many costly public services. If zoning tools were more fully adapted to serve agricultural objectives, we would not need to establish such minimums. Originally, minimum-lot regulations were used to prevent an undue concentration of population in urban areas. Now we also use this device to limit suburban development and thus to prevent a wasteful scattering of urban people in rural areas, and in the process to save fertile soils for farming. It would be much simpler and forthright, if the courts would go along, merely to set fertile soil areas aside for agriculture, as was done in Wisconsin with lands that are primarily suitable for forestry.

But if the indirect route of large-lot minimums is to be used to reserve fertile acres, shouldn't the minimums used vary with the type of farming that prevail in the particular district? Shouldn't they be large enough to permit

efficient operating units? Certainly, it would be unfortunate if our zoning tools encouraged a degree of parcellation that eventually pauperized the very agriculture that zoning presumed to protect.

Levels of Zoning

Then there are questions as to the level of government that might most effectively apply agricultural zoning regulations. Such regulations are usually invoked by local units of government, especially by the counties. But the incidence of the benefits from agricultural zoning are both rural and urban, local and statewide. Benefits accrue to people on the land, to agricultural industries and supply firms, to labor in both city and country, and insofar as a bountiful supply of homegrown food and fiber offers regional advantage, to all the people of the State. Very often, however, a local conflict of interest prevents timely action, or any effective zoning action for that matter, at the county level. Perhaps, when great benefits to the community at large are at stake, it is the State's duty to take appropriate action.

Appropriate action taken at the State level to help restore forest resources in northern Wisconsin included transfer of major responsibility for forest protection from the towns to the State; financial aid to local governments; adoption, after constitutional amendment, of a more equitable system of forest taxation; and annual outlays and loans by the State to encourage improved private and county forest management.

What are the appropriate actions that may be needed at State levels, not to restore, but to reserve the more fertile soils for agriculture? Presumably, such appropriate action will vary by States, depending on local conditions. Possibly, agricultural zoning districts invoked by the State will be required; obviously, protection of farm properties from confiscatory taxes will be needed and certainly, greater attention to the location of new highways, to avoid creating pressure on areas to be reserved for farming, will be helpful.

Is it probable that timely and effective action will be taken at either the local or the State level to protect fertile soils for farming? This question returns us to my previously expressed opinion that the greatest agricultural zoning problem at this time is an uncertainty in the minds of our people as to whether or not they want urban-industrial development and farming too. Possibly, we are nearing an affirmative decision. If and when that decision is made, other farm zoning problems are likely to be soon resolved. At that time, no doubt, the necessary steps will be taken to reserve the more fertile soils for farming.

CITIES AND FARMS, SIDE BY SIDE*

California can be justly proud of her farmers and of the abundant yields of her soils. It is first among the States in value of farm products sold. In 1954, cash receipts from farm marketings amounted to almost \$2.5 billion. Iowa, Illinois, and Texas were next in the order named. 1/

Total cropland in California, as reported in the 1950 Census of Agriculture, exceeded 13.7 million acres. Nearly half of this total consisted of irrigated land in farms, and millions of additional acres were pastured. Land in farms pastured in 1950, including irrigated and nonirrigated cropland used only for pasture totaled more than 23 million acres. 2/

In future decades, the State may count on some expansion of acreage under irrigation. Studies by the Bureau of Reclamation indicate that water is available for the ultimate irrigation, but at great cost, of 3.3 million more acres in California. 3/ This is an increase of approximately 50 percent above the 6.4 million acres irrigated in 1950.

Do we need to protect fertile cropland, particularly the more productive irrigated acres, from the suburban sprawl? Will the Nation need the products from these lands to feed future generations? Some answers to these questions are to be found in studies of population and dietary trends and in studies of ways to increase production of food and fiber.

In a recent release, the Bureau of the Census estimated a national population of 185 to 189 million by 1965. 4/ For 1975, the latest projection indicates a population of 199 to 221 million, which is substantially higher than earlier projections made for that year. 5/ Also, we are eating more and eating better. "The proportion of grain products and potatoes has declined about a third, while the proportion of livestock products has risen slightly,

*Address: Southern California Planning Institute, June 17-18, 1955, University of California, Los Angeles. [Not published]

1/ The Farm Income Situation, table 5, March 1955, Agriculture Marketing Service, U.S.D.A.

2/ U. S. Census of Agriculture, V. 1-pt. 33, table 1, p. 3, 1950. An additional 20 million acres of public lands was in seasonal grazing.

3/ The Reclamation Program, 1953-59, pp. 3,8, Golden Jubilee Edition, 1952, Bureau of Reclamation, U. S. Department of Interior.

4/ Current Population Reports, Population Estimates, table 2, Series P-25, No. 110, February 20, 1955.

5/ Current Population Reports, Population Estimates, Series P-25, No. 78, April 21, 1953. Estimates as high as 225 million by 1975 are indicated in an earlier study. See "Projections of Regional Distribution of Population of the United States to 1975," by Margaret Jarman Hagood and Jacob S. Siegal, Agricultural Economics Research, table 3, p. 47, April 1951.

and that of miscellaneous products--mainly fruits and vegetables--has gone up about 50 percent." 6/ The inclusion of more livestock products in the diet increases the cropland requirements per capita. 7/ The shift to fruits and vegetables increases the demand for irrigated land. 8/

Can Future Food Needs Be Met?

Can the Nation's farms produce the food and fiber needed by the larger population expected by 1975? Several recent studies have dealt with this question, but the conclusions vary somewhat because of differences in assumptions, particularly with respect to population growth and application of improved technology.

In 1950, the President's Water Resources Policy Commission estimated that "...the Nation faces the need for about 100 million new acres or their equivalent production by 1975..." to provide for a population of 190 million. 9/ The report indicated that the Nation's expanding requirements over the next 25 years are likely to be met "by a rather narrow margin" as a result of increased productivity of existing agricultural acreage, together with the production available from new land. The Commission predicted that this new land, which would total 30 million acres cropland equivalent would be brought into production by irrigation, drainage, flood protection, and clearing. 10/

Two years later the President's Materials Policy Commission estimated that a 1975 population of 193 million people would require agricultural production increases of 40 percent. 11/ The Commission concluded that "...agricultural requirements can be met by 1975 without adding in any significant way to the total of 1,142 million acres of land now in farms. This can be done by improving or upgrading the use of much of the land now in farms, and by bringing in new land only to offset any farm acres that will be taken out for urban and other uses." 12/ It was suggested that such losses, estimated at 15 million acres during the next 25 years, will largely be replaced from farm forest land. 13/

6/ "A Water Policy for the American People," Vol. 1, p. 156. A Report of the President's Water Resources Commission, 1950.

7/ Estimated at 0.14 acre per capita or 21 million acres for 150 million people. Id. at 157.

8/ Ibid.

9/ Id. at 156, 161.

10/ Id. at 162, 164.

11/ Report of the President's Materials Policy Commission, Vol. 1, p. 45, Vol. V, p. 64, June 1952.

12/ Id., Vol. V, at 71.

13/ Id., Vol. 1, at 46, 48.

Some Are Optimistic

There were also more optimistic forecasts: "A fertilizer study prepared for the (President's Materials Policy) Commission concludes that production from present acreage might be increased 200 percent by 1975 if every farmer used fertilizer up to the economic limit...and employed every other known good farming practice." The report concluded "that a 75 percent increase in productivity could be expected through a more moderate increase in use of fertilizer alone." 14/

More recently other forecasts were made. Nathan Koffsky (Agricultural Marketing Service) writing in the Journal of Farm Economics in 1953 assumed a population in 1975 of 210 million and a prospective demand that would require an increase from 1953 surplus levels of about 30 percent in agricultural production. 15/ "On its face," observed Koffsky, "this does not appear to be difficult to attain. It is approximately the amount of increase in agriculture production which has occurred in the last 13 years..." 16/

L. L. Boger (Michigan State College) assumed that total domestic population will approximate 220 million people by 1975, and then guessed that such population changes "will increase demand for food at least 40 percent." 17/ A year earlier, Sherman Johnson (Agricultural Research Service) speaking in December 1953 at the Mid-century Conference on Resources for the Future, observed: "If we take 1950 as a base year and project our 1975 needs in terms of population increase, per capita consumption, and gradual growth in level of exports and imports, those needs seem likely to come within a range of 40 to 50 percent increase from 1950. I am optimistic, Dr. Johnson observed, about the physical possibility of achieving an increase well within that range, but it will not come automatically." 18/

These observations caused Walter W. Wilcox (Library of Congress) to comment as follows:

"If anything, I am more optimistic than Dr. Johnson. The recent rate of technological increase looks as though it can be maintained. Consequently, barring drought and international emergencies, we are likely to have supplies

14/ Id., Vol. 1, p. 46, citing Vol. V, pp. 76-82, June 1952.

15/ Journal of Farm Economics, Proceedings number, pp. 794, 797, December 1954. Food requirements for domestic use were estimated to rise some 45 percent; total domestic and foreign demands might rise some 40 percent; but 1953 production was about 8 percent in excess of requirements leaving a net needed increase by 1975 of about 30 percent.

16/ Id. at 797.

17/ Id. at 803.

18/ The Nation Looks at its Resources, 65, Report of the Mid-Century Conference on Resources for the Future, November 1954.

pressing on available markets. It is my judgment that our tremendous surpluses are within a range of about 3 to 5 percent of our continual output. So we are very close to balance and are likely to continue that way." 19/

The Stork Won A Recent Race

Finally, there are the following observations of Dr. Byron T. Shaw, of the Agricultural Research Service, made at the Mid-century Conference on Resources for the Future in 1953:

"A couple of years ago the Agricultural Research Administration tried to estimate the size of this job, using the Census Bureau population projections of the time--190 million people by 1975. In 1950 we were using for the production of food 462 million acres of cropland equivalent. 19a/ We calculated that the requirements for the expected increased population would be 115 million acres more than was used in 1950, of which about 45 million acres would come from actual increases in cropland." Of this new land, 15 million acres would be obtained "from the release of land now required to produce feed for horses and mules, and about 30 million through irrigation, drainage, land clearing, and various methods of that type." "That," continued Dr. Shaw, "left us a deficit of 70 million acres. As against that figure we should recognize that all the improvements we have made in agriculture between 1935 and 1950 were equivalent to the production from 64 million acres." 20/

"On the basis of the latest Census Bureau population estimates for 1975, which range between a low of 190 million and a high of 221 million people," Dr. Shaw continued, "we can calculate therefore that the deficit in cropland available will vary between a low of 98 million acres and a high of 165 million acres." 21/

From the projections I have summarized can you tell who is likely to win the race, the stork or the farmers? It is apparent that the stork won the most recent race and sent the forecasters scurrying back to their crystal balls. Population estimates that were deemed optimistic only 5 years ago were proved to be conservative.

Go West Young Man

But what do the forecasters predict for California populationwise, and how will the expected local and national changes in population affect agriculture in this State?

19/ Id. at 66.

19a/ Cropland equivalent is cropland plus the cropland equivalent of pasture evaluated in terms of total production.

20/ The Nation Looks at its Resources, 66, Report of the Mid-Century Conference on Resources for the Future, November 1954.

21/ Ibid.

California's population may be expected to grow from an estimated 12.2 million in 1953 to 15.4 million by 1960 and to 17.8 million by 1965. 22/ If the 1965 estimate is realized, California's population will probably exceed that of the State of New York.

By 1975, according to another forecast, California may contain between 17 million and 30 million people. These estimates differ greatly, depending on whether rates of natural increase and migration were based on the low levels of 1930-40 or the high levels of 1940-53. 23/

An increase of 5 million people by 1965 represents a gain of approximately 1.5 million households, assuming 3.3 persons per household. 24/ Living, transportation, and working space for urban people and for farmers require an estimated 1.4 acres per family. The average for farmers includes the farmstead only, but not the farm. On this basis, approximately 2 million acres will be taken for these purposes in California during the 12-year term ending in 1965.

Are Fertile Soils Expendable?

Will the lands that are taken for these nonfarm purposes be chiefly the more fertile farmlands? Will irrigated lands used for citrus, truck, and other crops be acquired? Dietary trends will increase the demand for fruits and vegetables, which, according to one projection may be in short supply in 1975. 25/ These same trends will increase the demand for irrigated land. 26/ Two million acres, moreover, is about a third of the total present irrigated land in farms in the State, and this 2 million acres is almost two-thirds of the total acreage of new lands for which water is estimated to be available for ultimate irrigation.

A comparison of estimated future urban land requirements with total acreage in California of land suited for cultivation is sobering. Of the total 100 million acres in the State, only 12.4 million acres, or 12.4 percent, is comprised of land in capability classes I, II, and III, that is, land suitable for regular cultivation. Another 4.2 million acres in class IV is suitable

22/ Current Population Reports, Population Estimates, tables 1 and 2, Series P-25, No. 110, February 20, 1955.

23/ "Estimating California's Housing Demand, 1954 to 1965," by Paul F. Wendt, The Appraisal Journal, Oct. 1954, table IV, p. 567, citing University of California, Berkeley, Chancellor's Committee on Education, Training, and Research in the Problems of Western Development, Report of the Problems Subcommittee, Feb. 4, 5, Berkeley, California, p. 1-4, Table II, 1954.

24/ See Id., The Appraisal Journal at 564, 569. The 1952 National average of 3.3 persons per household is higher than recent California experience.

25/ "Report of the President's Materials Policy Commission," Vol. V, p. 66, Table V, and p. 68, June 1952.

26/ "A Water Policy for the American People," Vol. 1, p. 157. The Report of the President's Water Resources Policy Commission, 1950.

only for limited or occasional cultivation. The remaining land area of the State is not suited to cultivation, but it may be used for grazing, forestry, and other purposes, depending on its quality. 27/

But let us get a little closer to home. The Southern California Coastal Watershed, which includes all or part of San Diego, Riverside, San Bernardino, Orange, Los Angeles and Ventura Counties, contains slightly more than 7 million acres. Nearly 11 percent of this total, or 760,000 acres is classes I and II land, and another 500,000 acres is class III land. The authors of the 1952 publication, "Know California's Land," report that recent urban expansion in the watershed "...has been mostly on the more accessible class I and II lands, with the consequent loss of this good land for agricultural use and the subsequent development of the less desirable lands for intensive cropping." 28/

There are 980,000 acres of cropland in the watershed, of which 600,000 are irrigated. Urban areas, on the other hand, cover an estimated 700,000 acres. 29/

A measure of the disappearance of farmland is indicated by trends since 1937 of acreage in tree and truck crops in Los Angeles County. From 1937 through 1953, fruits and nuts acreage declined from 99,000 to 55,000 acres, and acreage in principal vegetables declined from 42,000 to 17,000 acres. 30/

Crops Versus Houses

What do the population projections we have examined mean for agriculture in California? Are the most fertile soils of the State destined to grow houses rather than crops? Only two decades ago the sons and daughters of the pioneers in the western Great Plains, dusted out and tracted off the land, trekked in tragic numbers to your State to work your rich and bountiful soils. They say there were two reasons for their coming: Technology and misuse of their soils.

A few decades hence will another story be written, this time of the farmers of a State being subdivided off the land, pushed from the fertile valleys up to the less productive hillsides? What then may they say were the reasons for their going? Possibly two: Transportation technology and an illogical allocation of fertile soils.

27/ "Know California's Land," by Leonard R. Wohletz and Edward F. Dolder, p. 5 and table 1, p. 7, February 1952. Some land designated Class VI in arid and semiarid regions would be suitable for cultivation if irrigated.

28/ Id. at 36, 37.

29/ Id. at 36.

30/ Data prepared by the Crop Reporting Board, USDA, from publications of the California Crop and Livestock Reporting Service.

Motor transportation and electric power have wrought a transformation whose final form is today only foreshadowed. Electricity and motor trucks permit economic decentralization of industry, and automobiles allow employees to live many miles from places of work. Trade areas and daily commuting distances are often measured in terms of travel time rather than in miles. The yardsticks of yesteryear are no longer suitable. Millions of people have come to accept morning and evening trips of 45 minutes to an hour between home and work.

Then someone invented expressways, a new urbanizing force. When permissible highway speeds are increased from 25 to 50 miles or more per hour, outlying areas are brought within accepted commuting zones. Presumably then, we can expect new suburbs beyond the suburbs, and scattered subdivisions far afield. And the expressway age is very young.

New Rural-Urban Communities

What kind of communities are present forces shaping for tomorrow? Cities and towns in the State are not far apart and population is increasing rapidly. With commuter zones expanding, and new towns forming, are we rushing toward the day when most of the fertile acres in the State will be within areas under development pressure? Certainly we need not expect all acreage within accepted commuting zones to be urbanized, but the future of agriculture in the State may well depend upon decisions that are made with respect to the agricultural quality of the lands that are diverted to nonfarm uses. The State has a choice either by inaction to permit the dismembering of its most basic industry, or by taking timely and appropriate action to "...make it possible for agriculture, industry and subdivisions to live side by side in peace." 31/

Forces Allocating Soil Resources

Why, as is often the case, does the urban sprawl first absorb the most fertile acres? What are the reasons for this illogical way of allocating soil resources? The reasons are partly historical. Pioneers located their farms in your fertile valleys and in the heart of those valleys they erected market towns to serve the farms. Napa, Lodi, Fresno, Modesto, Stockton, Sacramento, Woodland, and Chico are typical examples. Roads were built connecting these farms with towns, and other public facilities were provided. Later when the towns grew, advantage was taken of existing roads and facilities. With increasing population pressure these towns are spreading out over fertile acres, "destroying the very asset that brought them into being." 32/ The decline of ancient civilizations has been attributed to the wasting of natural resources, particularly soils. Are we jauntily sauntering down old beaten footpaths?

31/ "Where Do Farmers Go From Here?" by Carroll K. Hurd, San Jose Mercury-News, (California) Magazine Section, p. 12, Sunday, February 6, 1955.

32/ The Santa Clara Valley Farmer, Vol. 7, No. 7, pp. 1, 2, March issue, 1955. Santa Clara, California.

Another reason for the prevailing way of allocating soil resources is evidently our habit of looking at only a part of the problem. If the market price of a tract of land exceeds its value for farming, we generally conclude that a use other than agriculture is the best for the tract, from either a public or a private viewpoint. Insufficient attention is given to alternative sites of lower agricultural value that may be equally suitable for the proposed nonfarm use, be it subdivision, trade or industry. Nor is adequate consideration given to the advantages that might accrue to the community, the State, and its people, from allocating less fertile lands to nonfarm uses, when alternative sites are available. These extra-market benefits are both direct and indirect. They accrue to farmers, labor, trade, and industry, and particularly to processors and suppliers.

Considerations That Affect Community Decisions

When alternative lands of differing soil capability are available, and both are suitable for development for nonfarm uses, the community has a choice. In making its decision in the public interest the community might well be guided by careful studies of the several classes of benefits that may be retained or lost by the decision. Let us examine some of these.

Benefits To People On The Land

First, what are the benefits from maximizing agricultural production that accrue to the people on the land, that is, to ownership, to management, and to labor? Very often, all three of these benefits accrue to the same person.

In drawing hurried conclusions regarding the allocation of fertile soils, we may often overlook aspects other than net agricultural land income. Let me illustrate. Assuming a market price of \$3,000 per acre and a value for farming of \$1,500, we are likely to conclude that a tract's best use is a subdivision. But how do we arrive at the \$1,500 value of the tract for farming? Usually by capitalizing the net return to land. And the taxes we deduct often reflect costs of governmental service on other properties that have been shifted to farm landowners. Farming cannot win under such an arrangement.

Moreover, in drawing our hurried conclusions, we usually completely overlook the returns to labor and management which, for decision-making purposes, might also be taken into account. Yes, I've heard that labor and management are mobile and that displaced farmers can move into the next county, where there is more room, or into another State. However, their productive opportunities may be reduced, with a corresponding loss to the county or to the State, as the case may be.

Presumably, all farmers will not pocket a windfall profit from the real estate market. Some of both the less fortunate and young farmers who are just getting started, are likely to move up to the less fertile slopes, or to smaller farms, which are often of inadequate size. Agriculture is just as much a business as is trade and industry. Soil and water are part of the agricultural

plant. If farmers are called upon to operate a poor plant, or one that is too small, efficient production cannot be expected.

Benefits to Trade and Industry

Indirect benefits to a community from keeping the more fertile acres in production of food may be equally impressive. These benefits accrue to a varied group of recipients. First there are the activities collectively referred to as agricultural industries. These include canneries, freezers, dehydrators, packing plants, cold storage plants and warehouses, wineries, sugar beet stations and mills, creameries, condensereries, cheese factories, and so on, depending on the crops grown. Heavy losses of investments in agricultural industries are possible.

Another group that will benefit or suffer as the case may be are the supply firms that deal in hay, feed, seed, fertilizer, sprays, farm machinery, equipment, gasoline, automobiles, lumber, baskets, crates, and the hundreds of other items that farmers buy. There are the byproduct industries, the trucking firms, banks, merchants, and the many persons who look to the food industries and supply firms for employment. Merchants, of course, may make adjustments by selling other types of products to new customers rather than by selling the same plus other products to both established and new customers.

Avoiding Undue Disruption

Communities that are experiencing rapid urban growth are certain to have some growing pains, but with a little forethought an undue disruption might be avoided. Frequently, the market value of space for subdivisions is the same whether the sites are bare land or in fruit trees. But the social cost of having raw land subdivided is much less than with improved agricultural land. When orchards are bulldozed out, the investment in them is lost to the community. Because the quality of soil is not a major consideration for subdivision purposes, the community would gain by reserving the better soils for agriculture. Moreover, when urban growth displaces agriculture on fertile land, investments in irrigation and drainage facilities are often lost also as are the investments in industry and business closely related to agriculture.

Furthermore, the urban sprawl often results in wasteful use of many of the fertile acres that remain primarily in agricultural uses. Urban expansion usually radiates out along highways but sometimes subdivisions bypass suitable land nearer the city to create residential pockets farther out. Scattered outward for miles beyond city limits are a mixture of country homes, and residential and part-time farms. Parcellation of fertile land into farm units of uneconomic size often occurs. During the waiting period before eventual subdivision, the loss of agricultural production is often substantial. Among the causes are idle land and declining production per acre on many small farms, following a breakdown of rotation patterns and general deterioration of the farm plant.

Urban-Oriented Benefits

We have discussed the agriculture-oriented benefits that may accrue from reserving the more productive soils for farming. Consideration should also be given to another group of benefits which by contrast are urban oriented. Mention was made earlier of the forces that are blunting yesterday's sharp differences between the city and the country and that are prompting new community forms. With a little guidance, these new forms can be shaped to permit agriculture, industry, and subdivisions to live side by side. By directing urban growth toward the less fertile land, and by reserving the more productive soils for farming, the community, as it expands outward, can obtain in many areas the open spaces--agricultural greenbelts if you please--that are the dream of many urban planners.

Benefits frequently attributed to agricultural greenbelts are a lower overall density of population, a reduction of pressure on traffic arteries, a larger measure of safety stemming from their utility as major disaster firebreaks, and the amenities associated with spacious open spaces in urban areas. Many temporary open spaces are supplied by today's urban sprawl but when open areas are filled in, rural residents often lose the attraction that brought them to the country.

Substantial benefits may also accrue from a more concentrated urban dispersion on less fertile lands, following the setting aside of the more productive areas for farming. By concentrating development, large savings are possible in the cost of providing public services, including roads and streets, water, sewers, light and power, telephones, schools, and so on.

Communities should look beyond the difference between market prices and values for agriculture for guidance in allocative soil resources. Many benefits not reflected in this price-value relationship, as we have seen, may accrue from reserving the more fertile of alternative sites for agriculture. It seems short-sighted for communities that are fortunately endowed and can have both farms and urban growth to sacrifice the former for the latter instead of keeping the two. In case it is desirable, it seems that communities are justified in exercising both police powers and spending powers in order to direct urban growth to less fertile lands.

Divergence of Interest

We have examined at some length the many kinds of benefits that may result from reserving the more fertile soils for farming. Some of these benefits accrue to people on the land; others accrue to related industries, trades, and labor, which may or may not be located in the rural areas involved; still another group of nonagricultural benefits result to the adjacent urban community; and, finally, a statewide advantage may be gained in terms of food and raw material costs from maintaining an ample local production of food and fiber.

However, there are others who will not benefit. One can reasonably expect that attractive offers for land for subdivision purposes may create a conflict of interest among farm landowners and may generate some opposition to zoning or other measures for setting aside the better soils for farming. Moreover even though the farmers wholeheartedly support such measures, the legislative body of the county also represents and presumably reflects the attitudes of nonfarm people whose numbers are rapidly increasing. Some of these people may actively oppose the ordinance, and the large number who hold the balance of power may be passive.

Parenthetically, the ratio between location value and value for agriculture of many choice sites may exceed two to one, or \$3,000 versus \$1,500 per acre, the differences previously mentioned. The excess values in prohibited versus permitted zoning uses do not necessarily indicate an unreasonable or arbitrary use of zoning powers. Much larger ratios are commonplace under urban zoning ordinances. In the famous Euclid zoning case, the United States Supreme Court upheld an ordinance which denied an owner permission to use his property for a purpose for which it allegedly was four times as valuable as for the use permitted by the ordinance. 33/

The choice between alternative areas available for urban development should be based on analysis to determine the least costly from the viewpoint of the community. Assuming equivalent values for developed lots, the pertinent comparison would be between the costs involved. The significant costs would consist of the net agricultural values foregone, together with costs for essential improvements. The difference between the two would indicate the net community advantage of developing the least costly alternative. Under such circumstances, the prevailing market prices that have been created by the operation of community influence would not be a significant consideration.

What level of government should apply land use measures that promise benefits whose incidence will be rural and urban, local and statewide? An extreme Balkanization of local government often prevents many beneficiaries of exclusive farm zoning from expressing their economic interests at local levels. Among such people are beneficiaries who vote in incorporated municipalities or in other counties. Theoretically, their interest can find expression at the State level. Second, what type of land use measures should the appropriate level of government or governments apply if an effective job is to be done?

Protective Measures Needed

Is there need in California for both agriculture and industrial-urban growth? Or, rather, if studies indicate the desirability, does the State want both badly enough to take the measures that are necessary to reserve a fertile soil base for agriculture? If present trends continue, in the long

33/ Euclid v. Ambler Realty Co., 272 US 365 (1926).

run, the farmers are likely to be forced onto the less productive soils or out of the State. If such an eventuality is uninviting, how can an illogical allocation of soil resources be prevented?

Two alternative remedial approaches are suggested for your consideration. Both call for action at the State level. A third alternative might be a combination of the first two.

Limit Subdivision of Best Soils

Mention has been made of the State's total land area of 100 million acres of which only 12.4 million acres consist of land in land-capability classes I, II, and III. Only these three classes of land are suitable for regular cultivation. In order to protect these fertile soils for farming, the State might consider limiting future conversion to nonagricultural uses of classes I, II, and III land, in the absence of good reasons therefor. Subdivision that involves any of these three classes of land might be declared unlawful, except on approval of an appropriate State agency. A preliminary screening of proposed subdivisions might be attained, and possible error and delay avoided, by requiring on each subdivision plat a certification (by an agricultural technician or other appropriate local official) declaring that no class I, II, or III lands are involved; or alternatively, a certification that less than the maximum percentage allowed in the statute consists of classes I, II, or III land. It is suggested that plats proposing subdivision of any lands of the top three grades, or as the case may be, of a proportion of such lands in excess of the designated statutory maximum might well require approval by the aforementioned State agency.

Create Farm-Protection Districts

Under the second of the two alternatives, an appropriate State agency might be empowered to set aside the more fertile soils in farm-protection districts. The program might begin with the creation of districts to reserve fertile agricultural lands in critical areas. Later, new districts might be established as needed to protect other areas.

The State agency contemplated will need such powers as are appropriate to do the job, including statewide but functionally limited zoning powers. Among the other powers needed are authority to proceed on petition or on the agency's own initiative, with studies and hearings precedent to the creation of new districts. Power to enforce the regulations also will be needed.

Zoning and Subdivision Control Too

A third alternative for reserving the better soils for farming is a combination of State-administered farm-protection districts and restriction on subdivision of classes I, II, and III lands. Under this plan, State approval of subdivisions that involve the three grades of land would be required only in areas embraced within the series of districts that might be created.

Very Little That's New

In summary, let us examine both the old and the new in the proposed protection measures. First, an exercise of the police power at the State level is suggested. Zoning at the State level is not entirely new. It has been used in both Florida and Wisconsin. 34/ And State agencies in many States are required to pass upon subdivision plats in the interest of safety or health.

Second, exercise of the police power is proposed for the purpose of conserving a natural resource—the State's most fertile soils. Regulations of land use to conserve natural resources have been sustained as a proper exercise of the police power in many decisions. Courts have approved statutes to prevent the waste of natural gas and crude oil; to conserve timber resources; to conserve the food supply; to protect fish and wildlife; and to conserve the water supply of cities. 35/

Local communities have adopted zoning ordinances creating forestry-recreational districts, in which only forestry, recreation, and certain related uses are permitted. Other communities have greatly restricted the types of use permitted in residential districts. Recently, some ordinances have established districts in which only commerce or industry, as the case may be, is permitted. Also, a beginning at local levels has been made with farm zoning districts that limit land uses to agriculture and related activities.

Finally, courts have accepted an exercise of the police power in the interest of the general welfare alone. It is no longer necessary also to predicate such regulations on a furtherance of the public health, safety, or morals. 36/

34/ Fla. Spec. Acts 1947, C. 24580; 1949, C. 25888; Wis. Stat. sec. 343, 461 (1949); Building Height Cases, 181 W. 519, 195 N.W. 544 (1923).

35/ See Abstract of Opinion of the Solicitor on Constitutionality of Standard State Soil Conservation District Law, by Mastin G. White, Solicitor, A Standard State Soil Conservation District Law 40-42, US Dept. of Agr. 1936.

36/ State ex rel. Carter v. Harper, 182 Wis. 148, 196 N.W. 451 (1923); Berman v. Parker, 348 US 26 (1954); State ex rel. Saveland Park Holding Corp. v. Wieland, 69 N.W. 2d. 217 (Wis. 1955).

RESHAPING ZONING TOOLS TO SERVE AGRICULTURE*

I agreed to come up here to discuss "some agricultural zoning problems" expecting to learn far more than I leave with you. Zoning is mainly a local matter, after all. It has its roots in local communities and in zoning enabling legislation passed by State legislatures. Therefore, one may expect most zoning problems to be of local origin.

However, some agricultural zoning problems have a national flavor. It might be well to start our discussion with these.

Zoning ordinances and regulations are local laws. They have been referred to as local zoning tools. Like farm or other tools, they were shaped to do certain specific jobs. Therein is found our first agricultural zoning problem and a very difficult one it is.

Let me explain.

Zoning tools were first used in cities. They were designed for certain urban jobs.

Let us examine some of these jobs.

Our early cities grew up to be haphazard mixtures of land uses — homes, stores, and factories. Sometimes too, they were crowded, unhealthy, and potential fire hazards. Often, they ended as slums. Zoning tools were designed to prevent new urban growth from ending as slums in our growing cities.

Let us look at the tools that were created. There are three main types:

First, there are "use" regulations. Zoning regulations were passed to divide the community into districts — residential, commercial, and industrial. These use zoning tools were designed to prevent an unwise mixture of land uses in the future.

In residential districts, only homes and related uses designed to complement residential uses were permitted. These related uses included churches, schools, parks, libraries, and so on. Business and industry were excluded from residential districts.

Other districts were created for business and for industry.

*Presented at meeting of farm leaders, Trenton, New Jersey, February 24, 1958.
 [Not published.]

Use regulations provided the zoning tools for doing one job — preventing new areas of mixed land uses.

There remained the task of preventing new areas of overcrowding. To do this job and some related tasks, two other types of zoning tools were created. These were "building-tract" and "building-dimension" regulations.

Building-tract regulations included regulations of minimum sizes of lots or tracts, minimum setbacks, side and rear yards, and permissible lot coverage.

Building-dimension regulations included regulations of height, size, and bulk of buildings.

Building-tract and building-dimension regulations were useful in controlling the density of population. Larger lots with large yards and with only one or two-story houses meant fewer people per acre.

Urban zoning tasks, then, required three basic kinds of zoning regulations. There were use regulations to separate conflicting land uses, and building-tract and building-dimension regulations to control population densities.

Remember that these three basic kinds of regulations were shaped to further urban objectives. Keep in mind also that these basic types of regulations have become a part of our laws and traditions. They are authorized in enabling legislation and approved by many courts.

This brings us to the second agricultural zoning problem: How can these urban-oriented zoning tools that rural communities have inherited be reshaped to serve agriculture? Certainly, old regulations will need to be used in new ways. Also, some new kinds of zoning regulations may be needed.

Let us begin with a quick look at the way zoning tools were reshaped to serve the farm community in the cutover counties of Wisconsin in the 1930's. Then let us see how farmers in California have reshaped zoning tools in recent years.

In the 1930's, millions of acres of cutover land in northern Wisconsin became tax delinquent. This land was marginal for farming but valuable for forestry. Taxes were high because school services and roads had to be provided for many isolated settlers who were scattered throughout the wooded areas. Also, land clearing by these isolated settlers endangered the new forests.

The people of the cutover counties knew what they wanted and saw what they had to do. They wanted new forests on cutover acres but taxes had to come down.

The remedial program included a reshaping of urban-created zoning tools to do new jobs. They enclosed large blocks of cutover lands in new kinds of

zoning districts — forest zoning districts and forest-recreation zoning districts. Within these districts only forestry and recreation and about a dozen related uses were permitted. All other uses, including the establishment of new farms and new homes for year-long residence were prohibited.

Why? New farms that would be on marginal land in the first place would bring land clearing and sometimes forest fires. Also, the new farms and new homes for year-long residence would bring demands for school, road, and other public services. Because of the isolated farm locations, this would be unduly costly and would raise taxes.

The growing of new forests would pay out only if taxes were low.

But let us take a closer look at the forest and recreational zoning districts. These districts were of the exclusive type. Only the uses that furthered forestry and recreation were permitted. Such uses as new farms and residences for year-long occupancy, which had caused the problems, were barred.

Urban residential zoning districts are also exclusive-type districts. Only land uses and activities that further use of the districts for homes are permitted in such districts.

Exclusive-type districts are important in agricultural zoning. They are a sharp tool. In some situations, they are better than cumulative-type zoning districts.

Most farm zoning districts are of the cumulative type. Let's take a look at some typical regulations. In these districts, which often enclose the most fertile farmlands, all uses are permitted that are permitted in the more restricted residential districts. In addition, agriculture and related uses are permitted. The related uses include processing industries and farm supply firms. Most other kinds of business and industry are barred. Other types of districts are provided for them.

Let us assume that a cumulative-type farm zoning district is located in an area under urban pressure. There are many such districts. What is likely to happen to land uses in the district over a period of years?

We may expect nonfarm homes to be scattered throughout the district. We may expect entire farms to be subdivided. Also, the subdivisions may be scattered widely out among the farms. They often are.

The resulting mixture of agriculture, scattered nonfarm homes, and subdivisions will mean many new problems for the farmers who continue to farm in the district. Here are some of the likely problems — the probable urban-agricultural conflicts:

1. Urban expansion takes the most productive land first, leaving the hillsides for farming.

2. Loss of the best soils jeopardizes the economic base of agricultural industries and supply businesses.
3. Tax revenues from many nonfarm homes do not pay the cost of the schools and other public services required.
4. Public services not needed by farmers are demanded.
5. Improvement districts are created and farmland is included to help pay the cost.
6. Subdivisions bring farmers ever increasing assessments and higher taxes.
7. Subdivisions scattered through farming areas increase the cost of transporting children to schools.
8. Nonfarm residents object to farm odors and flies, which has resulted in regulation of farming practices by health authorities.
9. Nonfarm housewives object to smoke from smudge pots.
10. Nonfarm residents object to dust from farming operations, and to tractors operating in early hours and at night.
11. There are objections to crop spraying and dusting. This has resulted in the banning of some effective insecticides and in requiring time and wind permits. In some places, dusting may be done only at night.
12. Some fruit and berry growers post guards day and night at ripening time because of trespass hazards.
13. Air pollution hurts crops.
14. Floodwaters from subdivisions inundate farmland.
15. Pollution of irrigation water injures crops.
16. Pumping by scattered subdivisions lowers the water table.
17. Farmers' wells are contaminated from septic tanks.

Assuming an agricultural zoning district, how could these many urban-agricultural conflicts occur? They could occur because the zoning tools that were used obviously did not provide the protection that agriculture needed.

What was wrong? Apparently the tools used were shaped for urban ends. They were designed to encourage urban encroachment into the agricultural district. Nonfarm homes and subdivisions could locate anywhere in the zone. Very often this result is wanted. Agricultural zoning districts of this kind are intended to be transitional zones.

When different results are wanted, different zoning tools must be used. The urban-agricultural conflicts mentioned were caused largely by the scattering of nonfarm homes and subdivisions among the farms. Such scattering and parcellation of farms has been discouraged in a number of farm zoning districts. A zoning tool mentioned earlier — minimum building-tract regulation — was used. By requiring minimum building tracts of 2 to 5 acres or more, subdivisions and nonfarm homes were discouraged. They were not barred. However, the farm zoning districts were still of the cumulative type. They permitted nonfarm homes and related uses, plus agriculture and related uses.

More far-reaching zoning measures for protecting agriculture have been developed recently by California farmers. The new measures are exclusive-type agricultural zoning districts. In these districts, only agriculture and related activities, including processing industries and certain public and semipublic uses, are permitted. All other uses, including subdivision for nonfarm homesites, are prohibited. Zoning regulations in these districts are directed at the causes of urban-agricultural conflicts. To be doubly sure that the door is barred, large minimum building-tract sizes are required. These tracts range by districts from 1 to 10 acres.

I mentioned earlier that many exclusive-type urban residential districts have been created. Also, that the farmers in northern Wisconsin established exclusive-type forest-recreational zoning districts. In recent years, exclusive-type industrial zoning districts and exclusive-type commercial zoning districts have been created. Now agriculture is catching up.

Exclusive-type farm zoning districts have been established in several counties in the San Francisco area, among them, Santa Clara, San Mateo, San Joaquin, Stanislaus, and Merced counties. These farm zoning districts range in size from less than 100 acres to 175 square miles. Let us examine the zoning regulations of some of these districts.

Exclusive-type agricultural zoning began in Santa Clara County, south of San Francisco, so let us begin there. Its soils are productive and its agriculture is intensive. There are orchards and truck crops, and poultry and dairy farms.

The problems caused by urbanization differ somewhat for Santa Clara County farmers. All are paying higher taxes to defray the cost of additional public services. Some must incur added expense because nonfarm housewives object to smudge pots, dusting, and spraying of orchards or to smells from poultry and dairy operations. Many of the other urban-agricultural conflicts mentioned earlier occur also.

The creation of exclusive farm zones is initiated on petition of farmers. A dozen districts have been created in Santa Clara County. Most are for the protection of orchards — cherries, pears, apricots or prunes. One is an orchard and poultry district.

Zoning regulations for these districts are similar. Most kinds of agricultural uses are permitted, including field and truck crops, orchards and vineyards, nurseries, greenhouses, dairies and poultry raising, guest ranches, livestock ranches, and many other farm uses. Storage and processing activities are also permitted. Residences are permitted only as accessory uses that are incident to the use of the land for farming. Residences, therefore, are permitted for farm owners, tenants and employees, including temporary farm laborers. Nonfarm residences are prohibited.

In San Joaquin County, east of San Francisco, several large farm zoning districts of the exclusive type have been created. One district contains 175 square miles. This district encloses a group of islands on the delta of the San Joaquin River. Peat soils, which blow badly at times, prevail. Crops include alfalfa, barley, tomatoes, celery, truck, and some pasture. Livestock feeding operations are carried on also.

In this district, all agricultural uses and uses that are accessory or incidental thereto are permitted. Residences are an accessory use. Acreage may not be divided into tracts of less than 3, 5, or 10 acres, as indicated on the zoning map. One single-family dwelling or one duplex may be erected per tract, plus an additional one-family dwelling for each 10 acres. Also, housing may be erected for employees.

Here again, zoning tools were directed against the causes of urban-agricultural conflicts.

In San Mateo County, exclusive farm zones of a special type have been created to protect a cut-flower industry that returned \$7 million to growers in 1954. About half of the flowers are field-grown and the other half are grown under glass.

The flower-growing zoning districts are small — less than 100 acres each. They are located in developed residential areas. Before rezoning, these properties were nonconforming. The residential zoning regulations were pushing them out. If a greenhouse wore out or was destroyed, it could not be restored. After rezoning as flower-growing zones, greenhouses may be rebuilt and expanded.

The only land uses permitted in the flower zoning districts are the growing of flowers in the fields or under glass, and dwellings for owners, tenants, and employees. Minimum tracts may not be less than 1 acre. One dwelling is permitted on a 1-acre tract, two dwellings on a 3-acre tract, and an additional dwelling for each additional 3 acres.

Other new zoning techniques are also being developed to serve agriculture. Among these are garbage-feeding hog districts, transitional zones of "light" agriculture to separate "heavy" agriculture and subdivisions, and an agricultural-recreational zoning district. Additional innovations may be expected.

I have discussed two basic agricultural zoning problems that have national scope.

First come the difficulties that stem from the fact that initially our basic zoning tools were shaped for urban ends.

Second are the difficulties of reshaping urban-oriented tools so as to serve agriculture.

Assuming that adequate agricultural zoning tools are shaped, other problems remain. These remaining problems have a local orientation.

First, there is the problem of obtaining favorable enabling legislation in the jurisdiction.

Second, there is the need for early approval by the courts of agriculture-oriented zoning regulations.

Third, there is the problem of obtaining approval and support from the people, at local and State levels, of agriculture-oriented zoning.

Fourth, there is the problem of obtaining reasonable stability of agriculture-oriented zoning. Here, questions arise as to the appropriate level of government for applying agriculture-oriented zoning in view of the incidence of benefits.

Finally, there are problems of planning, both local and regional, and the coordination of agriculture-oriented zoning with other physical, fiscal, and regulatory programs.

ZONING OF PROSPECTIVE LAND USE AREAS*

Mr. and Mrs. Homemaker built their dream home by the roadside in Countryside, U.S.A. Into it went their dreams, their hopes, and most of their savings.

A few years passed; other homes were built; later a mixed development took place. An automobile graveyard was located down the road a way. A tavern opened nearby.

Mr. and Mrs. Homemaker got a rude awakening. The old charm of the countryside that had brought them there was gone. So were a goodly part of the savings they had invested in their home. Residential values plummeted.

You probably see similar neighborhoods every day. You can find them in every State. Growth is planless and haphazard. A pattern of mixed land uses prevails.

Of course, the community was not zoned, or if it was, no one paid any attention to the zoning ordinance. Timely zoning properly enforced could have prevented the mixture of incompatible land uses. But zoning alone cannot unscramble the land use mess.

Growth Has Been Fastest In Suburbia

In recent decades, community growth and development has been fastest in suburbia. Unfortunately, it has often been haphazard, without community planning and zoning guidance.

Let us pause a moment to look backward at what has happened. An explosive transportation technology joined forces with an institutional or historical lag in local government to pile up land use problems for Countryside, U.S.A.

Good roads and automobiles permitted development to spread far out into the country. The pattern of growth was not outward in concentric circles as is usually assumed. This was the pattern of growth that often prevailed before the motor age.

Today on the booming urban fringe, subdivisions tend to "leap-frog" over suitable land nearer the city to create residential pockets in farm communities farther out. Miles of operating farms are often bypassed. Into this area comes a scattering of homes strung along highways and byways. Ribbon business areas appear here and there along main highways. Shops and gas stations seem to spring up at every corner.

*Address, Southeast Appraisal Conference, Society of Residential Appraisers, June 7-9, 1959, Claridge Hotel, Memphis, Tenn. Portions appeared in "Countryside, U.S.A.," in Residential Appraiser 25(10): 14-24, October 1959.

Room in the area is found also for industry. There are both the new, clean, landscaped factories that are good neighbors, and the old smoky, ill-smelling factories.

That's the land use mixture — factories, stores, gas stations, homes, and farms — all mixed together planlessly without regard to possible damage to neighbors. Land use conflicts are bound to occur between homes, factories and stores, and between agriculture and nonfarm homes. Residential amenities are jeopardized and values decline.

Population explosion

The phrase "population explosion" has become a familiar postwar term. Since 1940, the population of the 48 States has increased by more than 41 million people (table 1). About 24 million of this increase are urban people who live for the most part in incorporated places.

TABLE 1.— Urban and rural population of the United States, 1930-58

Date	Total 1/	Urban	Rural		
			Total	Nonfarm	Farm 2/
	Millions	Millions	Millions	Millions	Millions
1930—	122.8	69.0	53.8	23.3	30.5
1940—	131.7	74.4	57.3	26.8	30.5
1950—	150.7	3/ 88.9	61.8	36.7	25.1
1956—	164.3	4/ 96.0	68.0	46.0	22.3
1958—	173.2	5/ 98.4	74.8	54.0	20.8
:	:	:	:	:	:
:	:	:	:	:	:

1/ Includes population, civilian, and military, for 48 States.

2/ Series Census-BAE, No. 16, March 9, 1953, and Series Census-AMS (P-27), No. 25, Aug. 8, 1958.

3/ Old urban definition. The new urban definition includes 96.5 million persons living in incorporated places of 2,500 or more, in unincorporated places of 2,500 or more, and in urban fringe areas.

4/ Series P-20, No. 71, Dec. 7, 1956, adjusted to old urban definition and for inclusion of military personnel.

5/ Estimated for old urban definition.

In the same period, farm population declined by almost 10 million people. But astonishingly, the rural nonfarm population increased by some 27 million people. These rural nonfarm people live on the urban fringe, in unincorporated villages, and scattered over the open country, often out among the farms.

These are the people who live in places with the fastest growth and development and, unfortunately, with the smallest amount of community planning and zoning guidance.

Population projections

Will the rate of population growth be as great in the next few decades as it has been in the recent past? If only we could gaze into the crystal ball for a peek at the stork's flight schedule. There are those who claim to have had a look. They say the stork is booked solid for several decades.

Population projections have been prepared by the Bureau of the Census for 1965 and for 1975. Their guesses for 1965 range from a low of 186 million to a high of 193 million people. That's an estimated gain of from 13 to 20 million people in 7 years (table 2).

Census estimates for 1975 range from 207 million to 228 million people. Compare these estimates with the Nation's present total of 173 million people.

Others have peeked at the flight schedule, too. They peeked at the year 2000. Population projections of the Social Security Administration for that year range from a low of 261 million to a high of 361 million. That's a lot more people whichever figure one chooses.

Where will these millions of people who are expected in the next decade and in successive decades find space to live, work, and play? Are present patterns of community growth and development likely to continue?

One can expect an increasing proportion to live in Countryside, U.S.A., beyond incorporated limits. It is likely that they will live farther away from the city. The new system of Interstate and Defense Highways that is now under construction will permit a reduction of travel time from home to work. When permissible highway speeds are increased from 25 to 50 miles or more per hour, outlying areas are brought within accepted commuting zones. Nonfarm homes may be more widely scattered out among the farms.

Repeating Yesterday's Mistakes

Today in Countryside, U.S.A., are we repeating the same land use mistakes that were made decades ago in our cities? Too often our early cities grew up to be planless, haphazard mixtures of land uses — homes, stores, and factories. Sometimes, too, they were crowded, unhealthy, and potential fire hazards. As we now know too well, many ended as slums.

TABLE 2.- Illustrative population projections, Continental United States,
1965-2000

Item	: Series AA	: Series A	: Series B	: Series C
	: <u>Millions</u>	: <u>Millions</u>	: <u>Millions</u>	: <u>Millions</u>
<u>Census calculations: 1/</u>	:	:	:	:
1965-----	: 193.3	: 190.3	: 190.3	: 186.3
1975-----	: 228.5	: 221.5	: 214.6	: 206.9
<u>Adjusted from Social Security:</u>	:	:	:	:
<u>calculations: 2/</u>	:	:	:	:
2000-----	: 361.4	: 328.1	: 318.1	: 260.6

1/ Assumes same age-sex mortality rates for all four series based on experience during the 1940's, as well as same allowances for net civilian immigration (about 240,000 annually). Series AA assumes that 1954-55 fertility levels will remain constant to 1975. Series A assumes that 1950-53 levels will remain constant to 1975. Series B assumes that 1950-53 levels will remain constant to 1975, then decline linearly to "prewar" levels by 1975. Series C assumes that 1950-53 levels will decline linearly to "prewar" levels by 1975. From Bureau of the Census Release Series P-25, No. 123, October 20, 1955.

2/ Adjusted from calculations of Social Security Administration, Department of Health, Education, and Welfare. Six projections were worked out by the Social Security Administration for the U. S. and its possessions. The four sets shown above exclude the two extremes and are reduced by 4.3 percent to adjust roughly to an estimated calculation for the Continental United States (excluding Alaska), as this is the percentage of Social Security calculations represented by territorial population and their special adjustment for underenumeration in 1955. From Actuarial Study No. 46, Social Security Administration, May 1957.

Prepared by H. H. Wooten, Farm Economics Research Division, Agricultural Research Service, USDA.

Urban zoning prevented slums

In the midtwenties an urban zoning movement gained momentum. Today most incorporated municipalities are zoned. Someday this may be true of Country-side, U.S.A.

Urban zoning tools were designed and used to prevent new urban areas from becoming bigger and better slums than the older sections.

Let us take a look at the tools that were created. There are three main types.

First, there are "use" regulations. These are designed to prevent an unwise mixture of land uses in the future. Use regulations are employed to divide the community into districts — residential, commercial, and industrial. Land uses that conflict and cause problems are thus kept apart.

In residential districts, for example, only homes and related uses designed to complement residential uses are permitted. These related uses include churches, schools, parks, libraries, and so on.

Other districts were created for business and for industry.

There remained the task of preventing new areas of overcrowding. To do this job and some related tasks, two other types of zoning tools were created. These are the "building-tract" and "building-size" regulations.

Building-tract regulations include regulation of minimum sizes of lots or tracts, minimum setbacks, side and rear yards, and permissible lot coverage.

Building-size regulations include regulation of height, size, and bulk of buildings.

Building-tract and building-size regulations are useful in controlling the density of populations. Larger lots with large yards and with only one or two-story houses mean fewer people per acre.

Urban zoning tasks, then, require three basic kinds of zoning regulations — use regulations to keep apart conflicting land uses, and building-tract and building-size regulations to control population densities and to do other jobs that are mentioned later.

New areas of land use conflicts

In the next few decades will counties and other rural units of government continue to be tardy in providing planning and zoning guidance and protection for the extended suburbia? If this is the case, may we not see the old land use conflicts repeated and perhaps some additional ones developed in the new residential areas?

Little more needs to be said about the old types of land use conflicts. As we have seen, homes, stores, and factories did not mix well, either in our early cities or in postwar suburbia. It's best for all concerned if these incompatible land uses are kept apart in separate zoning districts, for example.

Furthermore, nonfarm homes and some types of agriculture do not mix well either. Here again, there are land use conflicts that may have a depressing influence on residential values.

Urban-agricultural land use conflicts look different to farmers than to suburbanites, because their impacts on the two groups differ.

Viewed as the nonfarm resident sees it, these impacts are often reflected in unfavorable tax and fiscal policies, in the deprivation of adequate or customary public facilities and services, in health hazards, in esthetic deterioration, and sometimes in adverse local legislation.

Let us examine some of these impacts more closely.

Essential services denied.— The exploding urban fringe has required the outlay of untold millions to provide essential public services and facilities. Suburban sprawl sometimes multiplies the costs. Public improvements of all kinds are needed.

First among the needs are roads and schools. A major share of the cost of new local roads and streets are borne by the county or township, as the case may be. Often the farmer's tax dollar covers much of the cost.

A new subdivision in a farm community, for example, may require construction of three new schools: grade, junior high, and high. A large share of the cost of the schools is likely to be paid by the farmer taxpayers in the school district.

Later, public water systems and sanitary and storm sewers may be needed. The usual solution is the creation of improvement districts. Usually, also, farmland is included to help pay the cost.

Other public facilities and services are needed or greatly expanded. Among these are parks and playgrounds, school bus transportation, police and fire protection, and garbage collection.

The farmers already have many of these services; others they neither need nor want. Very often, therefore, farmers will oppose any public expenditures that may increase their taxes. As a result, rural nonfarm residents are often denied essential and customary public facilities and services in order to keep taxes down.

The suburbanites organize and protest that it isn't fair. The farmers point out that incomes of nonfarm people averaged \$2,034 per capita in 1957-58. In the same years, farmers' income per capita averaged only \$1,068. ^{1/} The farmers say this isn't fair either.

^{1/} The Farm Income Situation, FIS-172, Feb. 1959, table 2, p. 4, Agr. Marketing Service, U. S. D. A. In 1956, the average family income of farm operator families was \$4,035. Comparable income for nonfarm families was \$6,900. Later data were not readily available. "The Current Income Position of Commercial Farms," by Nathan M. Koffsky and Ernest W. Grove, Agr. Mkt. Ser., U. S. D. A. Paper submitted before Subcommittee on Agricultural Policy of Joint Economic Committee and appearing in Policy for Commercial Agriculture - Its Relation to Economic Growth and Stability, Nov. 22, 1957.

Farmers object strenuously to any increase in their taxes to help pay for community facilities and services that are needed by suburbanites. They say that such taxation is like a different kind of Robin Hood of Sherwood Forest. They say this one takes from the poor to give to the rich.

Hazards and amenities.— Other urban-agricultural conflicts are reflected in health hazards and in esthetic deterioration. These stem from an unwise mixture of incompatible land uses.

Spraying and dusting tree and field crops with poisonous pesticides are normal farming operations. When such pesticides drift onto residential properties, serious consequences may arise. Smoking smudge pots are also normal farming practices but are obnoxious to housewives.

Nonfarm housewives become extremely unhappy if their dream homes are located near hogpens, livestock feed yards, commercial poultry operations, or even modern dairies. There are likely to be unavoidable but unpleasant noises, smells, and flies. Residential values may suffer gravely. Yet such livestock and poultry operations are normal and necessary farming activities.

Farmers have reacted sharply to attempts by local governments through zoning to regulate farming operations that are objectionable to rural nonfarm residents. Many State legislatures have prohibited their respective counties or townships from passing zoning regulations that interfere in any way with agricultural activities.

A few States still do not allow any of their rural units of government to zone. Such denial of regulatory powers prevents the very community planning and zoning that might be used in the first place to prevent the urban-agricultural conflicts from occurring.

Using Zoning Tools To Protect Country Homes

Mention has been made of several kinds of zoning regulations that were designed to guide community growth in our cities. You may recall that these regulations were of three types: "use" regulations, "building-tract" regulations, and "building-size" regulations. A fourth type was control of population densities. The same kinds of zoning tools, with some reshaping, can serve Country-side, U.S.A.

Let us examine more closely the four chief kinds of zoning powers that State legislatures usually confer on rural units of government. After that, we shall see how each kind of regulation is used and discuss the benefits to be derived from the use of each.

The scope of the zoning powers that are granted is often spelled out in the following language:

"For the purpose of promoting health, safety, morals, or the general welfare of the community, the legislative body of

(counties, towns or townships) is hereby empowered to regulate and restrict (by districts)

- (1) the height, number of stories, sizes of buildings and other structures;
- (2) the percentage of lot that may be occupied, the size of yards, courts and other open spaces;
- (3) the density of population; and
- (4) the location and use of buildings, structures and land for trade, industry, residence, or other purposes."

(Some enabling laws here add: "Recreation, agriculture, grazing, water conservation, and forestry," or some of these.)

Building-height regulations

Let us take a closer look at building-size regulations. With this zoning tool, the community may regulate the height, number of stories, and size of buildings and other structures.

But why restrict the height and size of buildings? Here I hasten to add that zoning regulations usually limit detached one-family dwellings to $2\frac{1}{2}$ stories and not to exceed 35 feet in height.

There are many reasons for such height restrictions and all have a bearing on residential values.

Restricting the height of buildings assures a fair sharing of view, light, and air among neighbors. It prevents the pocketing of low dwellings between adjoining taller buildings and thus avoids many dark, gloomy, and airless side rooms. It helps to protect the privacy of private yards.

Restricting the height of buildings also prevents one owner from taking advantage of the open spaces that are set aside by others. It avoids the stunted grass, flowers, and shrubs that are so often found in residential yards that are shaded by adjoining taller buildings. In the winter, when sunlight is most wanted, it is reduced.

Also, tall buildings reflect more street noise than lower ones. On the other hand, trees and shrubbery tend to absorb noise.

The relation between building heights and population densities has been mentioned. Tall buildings house more people, attract more traffic, and cause more congestion than lower ones.

There is also a safety factor. Fires are more easily put out when houses are low. Roof fires may be reached with less costly fire-fighting equipment.

A final item should be mentioned. Building-height restrictions in one-family residential districts help to protect property values. Homeowners begin to move away and values decline following invasion by buildings that are out of harmony.

Building-tract regulations

Wise use of a second group of zoning tools can shower benefits upon the homeowner. Building-tract regulations are handy tools for obtaining adequate light, air, and open spaces around dwellings, and for assuring a suitable density of population in residential districts. Building-tract regulations make up a versatile and useful package of zoning tools. With these tools, the community may regulate and restrict the size of building lots or tracts, the setback of buildings, the size of front, side, and rear yards, and the percentage of tracts that may be covered by buildings.

A community may have many reasons for establishing building tracts of minimum size in its residential districts. It may want different minimums in different districts. For example, tracts of various sizes are suitable for small, medium-sized, or large dwellings. Or, the community may have some areas that are served by public water or sewer mains, or both; other areas may rely on private wells and septic tanks. In the latter areas, larger tracts are needed for sanitary reasons.

Now a word about setbacks. A reasonable setback of buildings from road or street reduces the noise, dust, and gas fumes that can reach the house and promotes health and safety. A sufficient setback also assures more light and air and produces a firebreak area. Fairly uniform front yards or setbacks add to the appearance of a neighborhood and to residential values. When setbacks differ greatly, the dwellings nearer the street shut off the view from those pocketed farther back.

Zoning tools can also be used to assure adequate side yards in residential areas. Dwellings that are too close together rob each other of light and air. Rooms with side windows only are likely to be dark and airless. Also, there is greater danger of fires spreading to adjoining buildings.

Side yards should be wide enough to assure privacy, permit entry in case of fire, and allow room for an offstreet parking platform or a private driveway. Adequate side yards improve the appearance of a neighborhood, prevent overcrowding, and assure more stable property values.

Adequate rear yards are equally important. An ample open space reduces the fire hazard from houses to the rear. It affords a measure of privacy and allows for light and a freer movement of air. It adds to the appearance and enjoyment of the home. Backyards provide an area of green and shade for family rest and recreation. They provide a safe place, which may be fenced, in which small children may play; and a place for garden, clothesline, and accessory buildings.

Population density regulations

Earlier mention was made of building-size and building-tract regulations which are related zoning tools that may be used to control population densities in residential districts. Large building tracts, large yards, and low coverage

allowances result in lower densities of population, while smaller tracts, smaller yards and greater tract coverage permit higher population densities.

A community may want to control population densities in its residential areas for many reasons. It may want to protect or create a variety of desirable zones for homes. It may want to prevent undue crowding of land, with its threat of future urban or rural slums. It may want to protect property values and the tax base. Or, the community may want to achieve all of these goals.

Other aims of the community may be to prevent concentrations of populations that will overtax water or sewer mains, drainage facilities, and roads, or that will necessitate costly additions to schools. All these aims are related to the basic reasons for using zoning tools — the fostering of public health, safety, morals, and general welfare.

Use regulations

The last and most important of the aforementioned groups of zoning tools are use regulations. The task of these tools is to keep incompatible land uses apart. With these zoning tools, the community can regulate and restrict the location and use of buildings, structures and land for trade, industry, residence, or other purposes. In other words, the community may establish separate districts for industry, for business, for homes, for agriculture, for forestry and recreation, and so on. A mixture of conflicting land uses, such as hog farms and nonfarm homes, may thus be avoided.

The chief task of use regulations in one-family residential districts is to protect residential areas from invasion by harmful land uses. One needn't go far to find once promising residential districts which after a few years became a mixture of conflicting land uses, including gas stations, stores, taverns, and junkyards. As a result, the character of the neighborhoods changed. Many homes declined in value.

With use zoning regulations, a community can permit selected harmonious uses of land and buildings in a district and exclude all others. In one-family residential zones, the uses usually permitted are one-family dwellings, accessory buildings, and activities and uses not conducted as a business. Exceptions are occupations customarily conducted in the home by doctors and other professional people.

Also permitted in these residential districts are such buildings and facilities as schools, playgrounds, parks, churches, libraries, and museums. The growing of row, field, and tree crops is always permitted, but poultry farming and livestock farming receive varied treatment depending on the density of settlement in the areas involved.

In considering what uses to permit, it is well to remember that a major objective of zoning for one-family districts is to create quiet, safe, attractive, and convenient neighborhoods for homes.

Use regulations are double-edged. Some uses are permitted and all others excluded. Among those ordinarily excluded from one-family zones are business and industry, including taverns, junkyards, billboards, and so on. The objective is to protect home neighborhoods from probable future invasion by injurious uses. Industries are likely to produce noise, smoke, and fumes. A store on every corner might be convenient, but it would mean an increase in noise, litter, fire hazard, and traffic congestion, which would depress residential property values. Timely zoning can prevent this.

Tax savings must be considered also. Often, more costly public facilities and services are needed for areas in which varied land uses are permitted than for districts zoned exclusively for homes and related uses. Perhaps the changing rural community can reap its greatest reward by using zoning tools to guide residential growth. By setting a pattern for the future, savings can be effected in outlays for roads and streets, water and sanitary facilities, schools and school services, police and fire protection, and other public and semipublic services.

Give The Dream Home Back

I would like to leave one more thought with you. It concerns Mr. and Mrs. Homemaker and their dream home in Countryside, U.S.A.

Their neighborhood was spoiled. Such spoilation has rightly been called "land pollution." The incompatible businesses are nonconforming properties. As such, zoning tools cannot be used to force them to close down or move away. They are privileged malignant growths that will slowly but surely destroy the neighborhood's residential values and amenities. The area is likely to end as a slum.

It would seem wise for the community to act quickly to remove the dangerous growth. But are the required legal tools available? Probably not. Later, when the end nears, the necessary remedial tools will be at hand.

After the homeowners have gone down for the third time, an urban renewal program may start. Under such a program, all properties are acquired by purchase or condemnation, the area is cleared, and a new start is made. This may be wasteful. It is always costly. Besides, the immediate landowners, although compensated, lose possession of their properties. New owners take over.

Cannot ways be found to permit the community to move sooner to remove the life-sapping cancers? As has been said, the job cannot be done with zoning tools alone.

But why not permit the community to remove harmful nonconforming uses and structures by purchase or by condemnation under its powers of eminent domain? After an area has gone completely to pot, this can be done. Why not use the same powers earlier? It would help to prevent further deterioration and clear the way for rehabilitation.

A beginning has been made among the States toward authorizing the condemnation of objectionable nonconforming properties. Enabling statutes in Illinois 2/ and Michigan 3/, and possibly others, empower cities and villages to acquire and remove harmful nonconforming uses and structures. The acquisition may be by purchase, condemnation, or otherwise. Under the Michigan statute, the costs incurred may be paid from general funds or assessed against beneficiaries in a special district.

Some provisions of a Minnesota statute may offer helpful leads. The statute permits cities of the first class to exercise powers of eminent domain rather than police powers to zone residential districts. Harmful nonconforming uses and structures may be acquired by purchase or condemnation. The city need not acquire the land involved. Title thereto can remain with the immediate landowners. The law requires an appraisal of damages suffered by each parcel of land as a result of the zoning restrictions, and a similar assessment of benefits. Damages, plus costs, are assessed against the property benefited. 4/

My purpose in citing the Illinois, Michigan, and Minnesota statutes, is not to suggest that zoning by eminent domain should replace zoning under the community's police powers. Far from it. What I am suggesting is that certain tasks cannot or have not been done with conventional zoning tools alone; that other community tools are needed to help with the job. Zoning alone cannot clean up the land use mess for Mr. and Mrs. Homemaker in Countryside, U.S.A. Ordinarily, zoning does not operate retroactively. But zoning tools can hold the land-use gains in residential neighborhoods as one by one the harmful nonconforming uses and structures are acquired by purchase or condemnation and removed.

Zoning supported by eminent domain can give their dream home back to Mr. and Mrs. Homemaker.

2/ Ill. Ann. Stat. (Smith-Hurd, 1942), 1958 Cum. Ann. Pocket Part, Ch. 24, sec. 73-11. See *People ex rel, Tuohy v. City of Chicago*, 394 Ill. 477, 68 N.E. 2d 761.

3/ Mich. Stat. Ann. (Henderson, 19), Revised Vol. 4-A, 1958, Ch. 54, sec. 5.2933(1). Ruled constitutional as embracing condemnation for public purposes. Op. Atty. Gen. March 7, 1947, No. 146 (Mich.).

4/ Minn. Stat. Ann. secs. 462.12 to 462.17 (1947). Condemnation of private property under statute was approved as a taking for a public purpose. *State v. Houghton*, 1920, 182 Minn. 77, 233 N.W. 831.

FARMERS TOO CAN BENEFIT FROM ZONING*

You may have heard this gripe many times. Usually, it is angry. "I just heard," a farmer explodes to his neighbor, "that those planners and zoners the county hired are getting ready to pass zoning regulations to tell us farmers what to plant, where to plant it, and when to plant it."

All of you know that such reports are untrue; that someone was misinformed. But did you know that in populous residential districts zoning tools are used to regulate and often to prohibit livestock and poultry farming?

Let me remind you too that the suburban explosion has spread subdivisions and nonfarm homes out among the farms in every State. In the near tomorrow, suburban sprawl may be much wider. At that time, new residential districts, which will enclose more farms, may be expected. Will the associated zoning regulations include restrictions on livestock, poultry, and possibly on other farming operations?

I was asked to talk today about some agricultural phases of zoning.

Zoning tools can be used for farmers or against them. The regulations I have just described were used against farmers. A little later I will describe some zoning regulations that are designed to protect agriculture.

Farmers should take a careful look at the tools in the zoning kit and then learn how to use them. There are tools there which if used wisely can save farmers and the community many dollars.

Farm Impacts of Urban Sprawl

Before proceeding with a discussion of zoning regulations for the protection of agriculture, I should like to spend a few minutes on the causes and nature of urban-agricultural land use conflicts and their impacts on farmers.

Causes of the problem

First, the causes, which are twofold -- a technological revolution plus a population explosion. Inventors and the stork have been working overtime, and both appear to have earned time-and-a-half.

Technology promotes change .- Good roads and automobiles have shattered barriers of distance and made it possible and convenient to live in the country but work in the city. Federal mortgage insurance has brought country homes within the financial reach of millions of families. The telephone, radio, and T.V. have crashed the bars of rural isolation. Electric power, household appliances, and the short work week have given time for enjoyment of country living.

*Address, Virginia Citizens Planning Association, June 20, 1959, Danville, Va. [Unpublished.]

At the same time, electricity and motor trucks have permitted economic decentralization of industry. Factories are often located in rural places; they provide employment for both local and nonlocal labor.

More and more people.— The technological revolution cleared the ways to Countryside, U.S.A. and the population explosion filled the ways with eager travelers.

Since 1940, continental United States excluding Alaska has increased in population by more than 41 million people. Urban people represent about 24 million of this increase. For the most part, these people live in incorporated places (table 1).

TABLE 1.— Urban and rural population of the United States, 1930-58

Date	Total ^{1/}	Urban	Rural		
			Total	Nonfarm	Farm ^{2/}
	Millions	Millions	Millions	Millions	Millions
1930—	122.8	69.0	53.8	23.3	30.5
1940—	131.7	74.4	57.3	26.8	30.5
1950—	150.7	^{3/} 88.9	61.8	36.7	25.1
1956—	164.3	^{4/} 96.0	68.0	46.0	22.3
1958—	173.2	^{5/} 98.4	74.8	54.0	20.8

^{1/} Includes population, civilian and military, for continental United States excluding Alaska.

^{2/} Series Census-BAE, No. 16, March 9, 1953, and Series Census-AMS (P-27), No. 25, Aug. 8, 1958.

^{3/} Old urban definition. The new urban definition includes 96.5 million persons living in incorporated places of 2,500 or more, in unincorporated places of 2,500 or more, and in urban fringe areas.

^{4/} Series P-20, No. 71, Dec. 7, 1956, adjusted to old urban definition and for inclusion of military personnel.

^{5/} Estimated for old urban definition.

In contrast, the farm population declined by almost 10 million in the same period. However, the rural nonfarm population increased by an astonishing total of some 27 million people. These are the people who live in unincorporated villages on the urban fringe and scattered over the open country, often out among the farms.

How many people will there be in continental United States excluding Alaska in 1965, in 1975, and in the year 2000? Some guesses have been made. Bureau of the Census estimates for 1965 range from a low of 186 million to a high of 193 million people. That's an estimated increase in 7 years of from 13 to 20 million persons.

Census estimates for 1975 range from 207 million to 228 million. Compare those estimates with our present 173 million people.

In 1970, the State of Virginia is expected to have from 700,000 to 900,000 more people than at present. 1/

Population projections for the year 2000 for continental United States excluding Alaska seem unbelievable. Estimates of the Social Security Administration range from a low of 261 million to a high of 361 million. That's a lot more people whichever figure one chooses.

Larger and larger sprawl.— Where will these expected millions live, work, and play? Will patterns of community development and growth in the next and successive decades be only enlargements of the recent past? If this happens, we will have more planless suburban sprawl; we will have worse mixtures of incompatible land uses; and we will lay up larger problems for tomorrow.

In recent decades, community growth has not been outward from the city in concentric circles as is often assumed. That theory developed before the motor age.

Today, expansion of the urban fringe usually radiates out along main highways for many miles. Subdivisions often tend to "leapfrog" outward, bypassing much suitable land nearer the city. This creates residential islands or pockets among the farms. Also, into this area there comes a scattering along highways and byways of urban-oriented people to establish country homes, and residential and part-time farms.

Ribbon business areas appear here and there along main highways. Shops and gas stations seem to be found at every corner.

Junk and car-wrecking yards add to the land use mixture. There are factories also — both the clean, landscaped type that are good neighbors, and the other type, the old smoky and odorous ones.

It's a bad land use mixture. Factories, stores, gas stations, junk yards, farms, and nonfarm homes do not mix well. Many landowners will fail to realize the full potentials of their properties because of nearby harmful land uses. Some landowners will be badly hurt and among them will be farmers. I shall discuss that aspect later.

1/ Current Population Reports, Population Estimates, Series P-25, No. 160, Aug. 9, 1957, Bureau of the Census.

TABLE 2.- Illustrative population projects, continental United States excluding Alaska, 1965-2000

Item	Series AA	Series A	Series B	Series C
	Millions	Millions	Millions	Millions
<u>Census calculations: 1/</u>				
1965-----	193.3	190.3	190.3	186.3
1975-----	228.5	221.5	214.6	206.9
<u>Adjusted from Social Security calculations: 2/</u>				
2000-----	361.4	328.1	318.1	260.6

1/ Assumes same age-sex mortality rates for all four series based on experience during the 1940's, as well as same allowances for net civilian immigration (about 240,000 annually). Series AA assumes that 1954-55 fertility levels will remain constant to 1975. Series A assumes that 1950-53 levels will remain constant to 1975. Series B assumes that 1950-53 levels will remain constant to 1975, then decline linearly to "prewar" levels by 1975. Series C assumes that 1950-53 levels will decline linearly to "prewar" levels by 1975. From Bureau of the Census Release Series P-25, No. 123, October 20, 1955.

2/ Adjusted from calculations of Social Security Administration, Department of Health, Education, and Welfare. Six projections were worked out by the Social Security Administration for the U. S. and its possessions. The four sets shown above exclude the two extremes and are reduced by 4.3 percent to adjust roughly to an estimated calculation for continental United States excluding Alaska, as this is the percentage of Social Security calculations represented by territorial population and their special adjustment for underenumeration in 1955. From Actuarial Study No. 46, Social Security Administration, May 1957.

Prepared by H. H. Wooten, Farm Economics Research Division, Agricultural Research Service, USDA.

The problems may get worse in the future instead of better. Development may be more scattered and may extend farther away from the city. The new system of Interstate and Defense Highways will permit a reduction of travel time from country home to city employment. When permissible speeds are increased from 25 to 50 miles or more per hour, outlying areas are brought within accepted commuting zones. Farmers may have more and more neighbors who work in the city. The transportation revolution has teamed up with the population explosion. The team is likely to give us larger areas of urban-agricultural conflict.

Sprawl wastes farmland

Unplanned suburbias are ravenous users and wasters of agricultural land. Preliminary estimates of the Farm Economics Research Division, ARS, USDA, indicate that every time unplanned urban growth converts an acre of farmland to urban uses, it wastes, on the average, three more agricultural acres. These ratios will vary from area to area; they tend to be lower where soils are particularly fertile, crops grown are especially profitable, or investment in land is unusually high.

Similar findings were reported by J. W. Fanning in a recent issue of The Progressive Farmer. Professor Fanning observed:

"Studies show that in unplanned urban growth, when one acre of farmland goes into urban use, three other acres are affected. Two of these acres go out of agriculture and into a ripening or waiting stage for later urban or rural nonfarm use. The other acre becomes idle or undeveloped." 2/

How far out from a city center must suburbia reach to find ample living, transportation, and working space for an additional one million people? The answers will vary, of course, with the lay of the land around each city, but here are some rough yardsticks.

The national average land requirement of urban areas is less than 2.5 square miles per 10,000 people. Let's add a half-section for suburbia and call it 3 square miles. You may want to use a different figure as a yardstick in your community.

The land area within a circle extending 5 miles from an urban center contains nearly 78 square miles (fig. 1). Assuming that the entire area is suitable for development, there is space within the 5-mile circle for 260,000 people.

A circle with a radius of 10 miles contains 314 square miles. That's enough space, assuming the same topography and population density, for more than a million people.

Beyond the 10-mile circle there is a 20-mile circle and beyond that are other circles farther out. Assuming the same conditions as before, it is estimated that space is available for 4 million people within 20 miles and for 9 million people within 30 miles of the urban core.

2/ Rural-Urban Planning a Must Today, by J. W. Fanning, Head, Department of Economics, College of Agriculture, University of Georgia, appearing in The Progressive Farmer, April 1959.

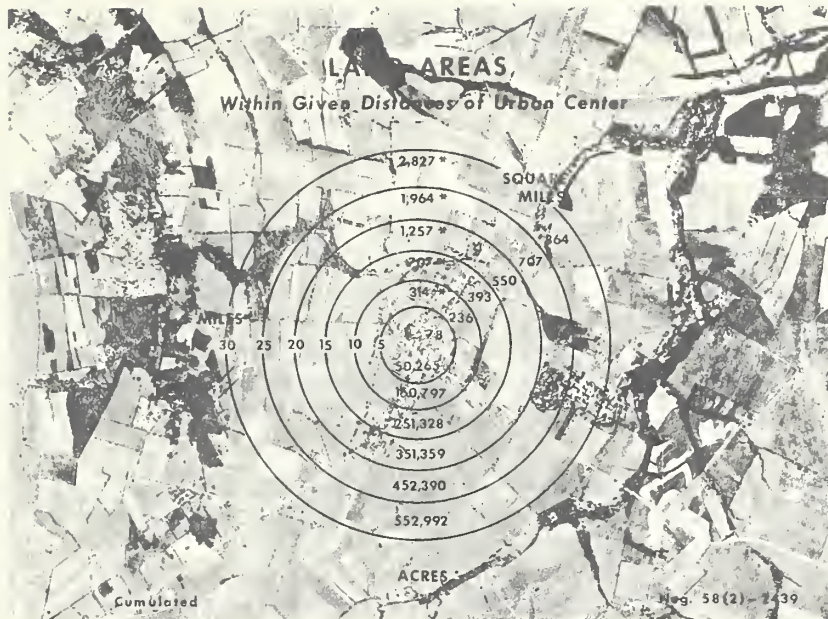


Figure 1.- Automobiles and modern highways have brought vast areas of farmland within accepted commuting distances. In most communities, only a small percentage of the available land will be needed for nonfarm uses in the foreseeable future.

Although there is space for increasing numbers of people within successively larger circles around a city, much suitable land nearer the city is usually bypassed and other land is developed farther out. Will the bypassed areas ever fill in? Remember that there is space for 9 million people within the 30-mile circle. Today, many commuters rush forth and back much farther than this from home to work and return. Tomorrow, Interstate Highways will extend commuter zones.

Unplanned suburban growth seems to promise for the future (1) more idle land, (2) an untimely decline in agriculture, and (3) more urban-agricultural conflicts on an extended urban fringe.

Urban-agricultural conflicts

A haphazard mixture of land uses - agriculture, nonfarm homes, business, and industry - often results in serious urban-agricultural conflicts. These conflicts are of several types. Let us look at some of them from the farmer's viewpoint.

Urban-agricultural conflicts and the problems they create may be separated into these three groups:

1. Problems of excessive taxes resulting from a shifting to farm taxpayers of development and public service costs.
2. Problems that result from adverse effects of nonfarm land uses on agricultural plant and operations.

3. Problems created by objections of nonfarm people to certain farming activities and practices.

Let us examine some examples from each group, beginning with the tax impacts.

Tax burden shifted.— A rapidly growing urban fringe requires outlays for many new public facilities and services within a few years. Costs are often staggering. Sometimes the costs are multiplied by suburban sprawl.

First among the needs of developing areas are more streets and roads and new or enlarged schools. Farmer taxpayers in the county or school district, as the case may be, often bear a large share of the costs. Tax revenues from many nonfarm homes do not pay the cost of the public services required.

Later, the area may need public water mains and sanitary and storm sewers. The usual solution is to create improvement districts which very often include farmland to help pay the cost.

Other public facilities and services — parks and playgrounds, school bus transportation, police and fire protection, garbage collection, and so on, are needed soon also.

Farmers already have and have paid for many of the public facilities that are needed by their nonfarm neighbors. Other public facilities and services they neither need nor want.

Farmers on the urban fringe usually pay more in taxes than they receive in public services. This inequitable tax burden is due to the use of assessed value of land and improvements as the basis for local taxation.

A tax on real estate to raise local revenues is based on two time-honored tax principles:

The first assumes that the assessed valuation of real estate owned, which for farmers consists largely of land, reflects correctly the tax-paying ability of farmers compared with rural nonfarm residents. Often, this is not true of the urban fringe.

The second tax principle assumes that the cost of and benefits from public services are related fairly to actual and assessed values of each real property ownership. This may not hold in fact. Taxes on operating farms that consist of large tracts of land on the urban fringe are often many times as high as the value of the public services the owners receive for their tax money.

Farm plant damaged.— So much for the shifting of the tax burden. The second group of land use conflicts mentioned earlier are reflected in damage to the agricultural plant and operations. Such damage may take several forms.

First among these is the diversion from agriculture of the most level, the least erodible, and the most fertile land. Urban expansion often takes such highly productive land first, even when other suitable land in the community is

available for nonfarm uses. A wiser allocation of land resources would foster urban growth and farming too.

Other kinds of urban-induced damage to the agricultural plant and operations are a lowering of the underground water table as a result of pumping to supply scattered subdivisions; more frequent flooding of farmlands because of rapid runoffs from roofs and streets; injury to irrigated crops because of pollution of streamflows; contamination of farmer's wells from septic tanks; and injury to crops because of air pollution. There are also trespass hazards, particularly at harvesttime.

A century ago farmers wanted little from the city. Few off-the-farm supplies were needed to grow a crop. Processing also was done largely on the farm with family or home labor.

It's different today. In this day of agri-business, the farm plant is coupled with much that is found in the city. Urban business enterprises that are agriculture-oriented to the greatest extent are farm supply and service firms, marketing outlets, and processing industries.

Farmers buy hay, feed, seed, fertilizer, sprays, farm machinery, gasoline, lumber, crates, and hundreds of other items. They sell their crops in the city. Processing, depending on the crops grown, is performed in town in a variety of factories - canneries, freezers, packing plants, creameries, cheese factories, cold storage plants, warehouses, and so on.

If a community permits its agricultural base to be curtailed or destroyed, this occurrence will soon be reflected in a decline in farm-oriented business in its cities and towns.

Objections to farming practices.- The third group of urban-agricultural conflicts mentioned earlier are evidenced by objections by nonfarm people to some normal farming operations and practices.

There are objections to smoke from smudgepots, dust from farming operations, and noises made by farm animals and by tractors that operate in early hours and at night.

Spraying and dusting tree and field crops with poisonous pesticides are normal farming operations. When such pesticides drift onto residential properties, there are serious dangers. This has resulted in the banning of some effective insecticides and in requirements for time and wind permits. In some places, dusting may be done only at night.

Finally, nonfarm people in areas of mixed land uses object to poultry and livestock operations, including commercial poultry farms, dairy farms, livestock feed yards, and hog farms, among others. There are likely to be unavoidable but unpleasant noises, smells, and flies. Yet such livestock and poultry operations are necessary and normal farming activities. The objections have resulted in regulation of farming and feeding practices by health authorities.

Using Zoning to Protect Agriculture

What can farmers do to avoid these conflicts and the problems they cause?

Leaving agricultural areas unzoned won't help. Inaction merely permits urban encroachment to move in unguided. It permits farm areas to become the dumping ground for commercial and industrial activities that are excluded elsewhere.

Another way is to except agricultural activities from zoning regulations. This is done in a number of States. But exemption of agriculture from zoning will not stop urban encroachment; nor will it prevent the resulting increases in taxes or reduce the impact on farmers of conflicts between nonfarm and agricultural land uses. However, the exemption does mean that objections to farming activities and practices are not reflected in zoning restrictions on agriculture.

A third approach is to apply the agricultural exemptions only to farms that are larger than a size specified in the zoning ordinance. Agricultural activities on small residential farms of 1, 3, 5, or 10 acres, for example, depending on the ordinance, would not be exempt. As in residential zoning districts, objectionable agricultural activities on these small tracts might be restricted. This third approach is used by a number of counties in Illinois.

A fourth approach is to exclude incompatible nonfarm land uses from agricultural zoning districts. Many zoning ordinances, in both States with and those without enabling laws that exempt agriculture from zoning regulations, exclude harmful business and industrial activities from agricultural zones. In California, some recent ordinances also exclude nonfarm homes from agricultural districts.

We have examined four ways of dealing with urban encroachment: (1) Leave farm areas unzoned; (2) exempt agricultural activities from zoning regulations; (3) have such exemptions not apply to small tracts; and (4) use zoning tools to keep agricultural uses apart from nonfarm uses that cause urban-agricultural conflicts.

Each of the first three methods invites urban encroachment with its resulting conflicts. The fourth method reaches the cause of the problem by keeping agricultural uses separated from conflicting nonfarm uses.

Tasks for zoning

Zoning regulations are community tools that may be used to attain certain kinds of community objectives.

Zoning for the protection of agriculture might include some or all of the following objectives:

1. To prevent scattered haphazard suburban growth and guide orderly transition.

2. To secure economy in governmental expenditures.
3. To avoid restricting or hampering agriculture because of preventable urban-agricultural conflicts.
4. To prevent an unfair shifting to farmer taxpayers of public construction and service costs.
5. To prevent rural areas from becoming the dumping grounds for land uses that are not wanted elsewhere.
6. To keep productive farming areas in agriculture until they are needed for nonfarm uses.
7. To reserve the more fertile soils for farming.
8. To protect the economic base of local agricultural supply, service, and marketing firms and processing industries.

Zoning tools available

Most Virginia communities have four groups of zoning tools that may be used for gaining these community objectives. The tools are "use," "building-tract," "building-size," and "population-density" regulations.

With building-tract regulations, the community may regulate and restrict the size of building lots or tracts, the setback of buildings, the size of front, side, and rear yards, and the percentage of tracts that may be covered by buildings.

With building-size regulations, the community may regulate the height, number of stories, and size of buildings and other structures.

Densities of population are influenced by building-tract and building-size regulations. Large building tracts, large yards, low coverage allowances, and one-story houses result in lower densities of population per acre, while smaller tracts, smaller yards, greater tract coverage, and multi-story houses permit higher population densities.

Use regulations are the most important of the four groups of zoning tools. Use regulations may be employed to keep incompatible land uses apart. They can be used to prevent an unwise mixture of land uses in the future. With these zoning tools, the community can regulate and restrict the location and use of buildings, structures and land for trade, industry, residence, or other purposes. That is, the community can establish separate districts for industry, for business, for homes, for agriculture, for forestry and recreation, and so on. Harmful conflicts between land uses can thus be avoided.

These four groups of tools - use, building-tract, building-size, and population density regulations - comprise the community's zoning kit. These tools have been used in a diversity of ways to foster and protect residential,

business, and industrial districts. The same four classes of zoning tools can be used in somewhat different ways for the protection of agriculture. In the minutes that remain I want to confine my remarks to a discussion of farm zoning districts.

Farm zoning districts

Farm zoning districts may be grouped into three main classes.

Those of the first class enclose agricultural areas from which objectionable business and industrial activities are excluded.

In the second class, nonfarm homes are also discouraged but not barred.

In districts of the third class, the zoning ordinances also forbid the construction of nonfarm homes in agricultural areas.

In districts zoned for farming, as in other kinds of zoning districts, certain land uses are permitted and others are excluded. The regulations vary with districts.

Farm zoning districts of the first group or class usually permit all kinds of farming activities, except hog farms for feeding garbage and offal. Also permitted are residences, both farm and nonfarm, plus home occupations, schools, churches, and many other uses and facilities that are allowed in residential districts. Other uses that are sometimes permitted are plants for processing and storing agricultural products, earth-extraction industries, public utility facilities, and airports.

Most other uses and activities are prohibited in these districts. Among the prohibited are most kinds of business and industry, except agricultural industries. Sometimes expressly prohibited in farming districts are wrecking yards, taverns, public dance halls, automobile courts, and trailer camps.

Regulations that are applied in the second class of farm zoning districts are very similar to those applied in the first group, with one important exception - the requirement of large minimum building lot or tract sizes. Minimums that range from 1 to 5 acres or more are required at times to discourage residential development in agricultural areas.

A more direct approach is used in the third group of farm zoning districts. Only agriculture, a few related activities that further the use of land for farming, and certain public and semipublic uses are permitted. All other uses including nonfarm residences are excluded. To be doubly sure, minimum tracts ranging by districts up to 10 acres are required.

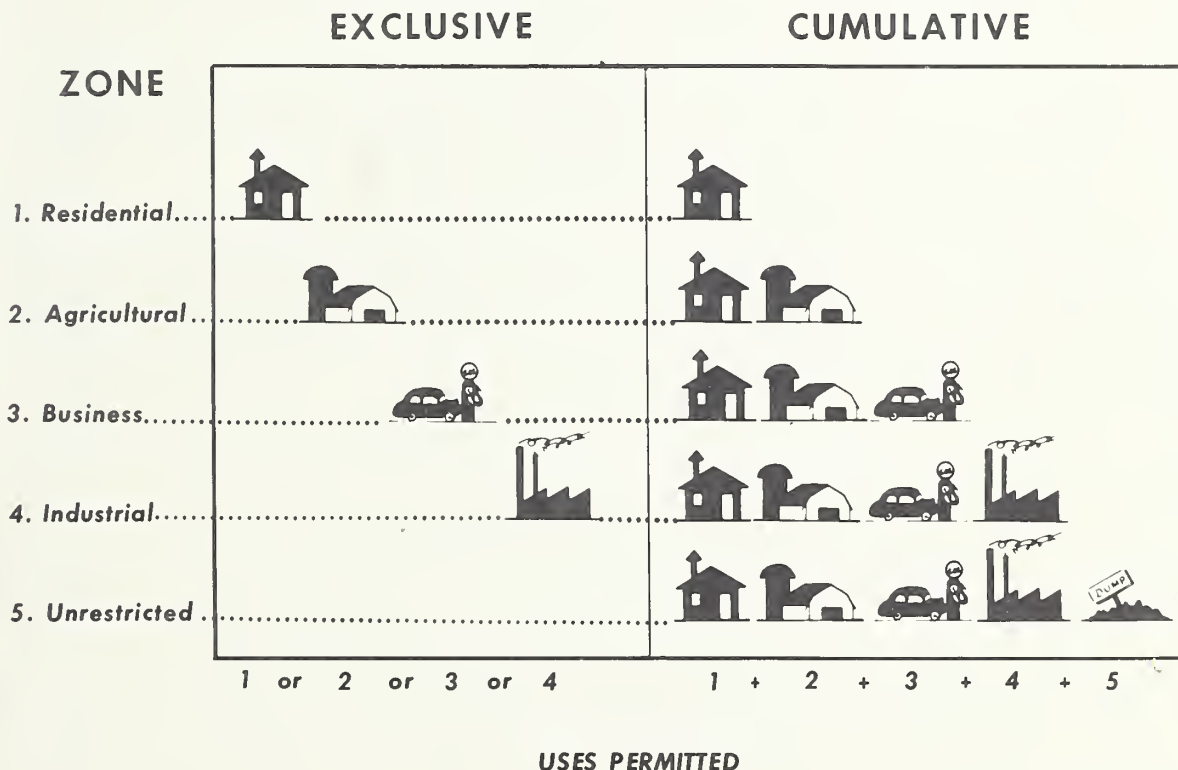
Districts in this third group or class are new in agricultural zoning. They were developed a few years ago by farmers in California. They have been called "exclusive" agricultural zoning districts.

Figure 2 depicts two basically different zoning techniques: the "exclusive" type of zoning district versus the "cumulative" type. Farm zoning districts of the third group are of the exclusive type. Districts in the first and second groups are of the cumulative type.

The primary land uses in all exclusive-type farm zoning districts are agricultural. Other permitted uses are secondary and accessory to farming. Residences are permitted only as accessory uses to the permitted agricultural uses. Usually the need for farm housing varies with both the intensity of farming and its type. It includes housing for owners, tenants, and others who work the land.

The various types of farming call for farm sites of appropriate but differing sizes. Often, intensive types of farming are conducted on small tracts - for example, nurseries and greenhouses on 1-acre tracts, poultry farms on tracts of 3 to 5 acres, and feedlot dairies of 5 or 10 acres. Zoning regulations reflect these different needs.

TYPES OF ZONING DISTRICTS



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Figure 2.- The names of the respective zoning districts indicate the major class of land uses permitted in exclusive-type districts, and the last or least restricted of the array of land uses allowed in the cumulative-type districts.

Exclusive-type agricultural zoning districts have been created in California to protect general farming areas as well as areas of specialized farming, such as orchards, truck crops, dairying, and poultry farming. Districts range in size from a 35-acre zone used for growing field and greenhouse flowers to a district that contains 175 square miles and is devoted to several types of farming.

New patterns of growth

The urban explosion has been good for America. From the streets and tenements of crowded cities, a vast and eager folk have streamed to plant new roots in suburbia. There, many millions have founded homes. A new generation is growing up in the sunshine and green of open spaces.

Another stream of eager folk have moved in from the farms. They have found new opportunities and a new way of life in suburbia.

America is a land of ever new frontiers. But imprints of older frontiers remain. In suburbia, as on earlier frontiers, we are reckless in consuming our natural resources. In our yearning for community development, we often waste and destroy unnecessarily much that is valuable. There is ample room on our expanding urban fringe for suburban growth and farming too.

You may remember that there is space for 9 million people within 30 miles of the urban core. Remember, also, that daily commuting zones now extend that far out and that tomorrow they will reach even farther.

The technological revolution plus the population explosion are relentless in carving new frontiers in rural communities. New urban forms are being shaped. Yesterday's sharp separation between town and country has been blunted. Farmers and city folk are now neighbors. Ways must be found to permit cities and farms to prosper side by side in peace.

